

Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr
 500 505 510
 Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile
 515 520 525
 Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu
 530 535 540
 Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys
 545 550 555 560
 Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala
 565 570 575
 Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala
 580 585 590
 Ala Ser Gln Ala Ala Leu Gly Leu
 595 600

<210> 318
 <211> 624
 <212> PRT
 <213> Homo sapiens

<400> 318
 Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1 5 10 15
 Tyr Ser Arg Gly Val Phe Arg Arg Asp Ala His Lys Ser Glu Val Ala
 20 25 30
 His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
 35 40 45
 Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
 50 55 60
 Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
 65 70 75 80
 Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
 85 90 95
 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
 100 105 110
 Asp Cys Cys Ala Lys Gln Glu Pro Gly Arg Asn Glu Cys Phe Leu Gln
 115 120 125
 His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
 130 135 140
 Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys
 145 150 155 160
 Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro
 165 170 175

Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys
 180 185 190
 Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu
 195 200 205
 Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys
 210 215 220
 Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val
 225 230 235 240
 Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser
 245 250 255
 Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly
 260 265 270
 Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile
 275 280 285
 Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu
 290 295 300
 Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp
 305 310 315 320
 Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser
 325 330 335
 Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly
 340 345 350
 Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val
 355 360 365
 Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys
 370 375 380
 Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu
 385 390 395 400
 Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys
 405 410 415
 Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu
 420 425 430
 Val Arg Tyr Thr Lys Lys Val Pro Glu Val Ser Thr Pro Thr Leu Val
 435 440 445
 Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His
 450 455 460
 Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val
 465 470 475 480
 Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg
 485 490 495
 Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe
 500 505 510

Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala
 515 520 525
 Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu
 530 535 540
 Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys
 545 550 555 560
 Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala
 565 570 575
 Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe
 580 585 590
 Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
 595 600 605
 Leu Gly Gly Ser Gly Gly Ser Glu Trp Pro Arg Pro Gln Ile Pro Pro
 610 615 620

<210> 319
 <211> 742
 <212> PRT
 <213> Homo sapiens

<400> 319
 Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1 5 10 15
 Tyr Ser Arg Ser Leu Asp Lys Arg Ala Pro Thr Ser Ser Ser Thr Lys
 20 25 30
 Lys Thr Gln Leu Gln Leu Glu His Leu Leu Leu Asp Leu Gln Met Ile
 35 40 45
 Leu Asn Gly Ile Asn Asn Tyr Lys Asn Pro Lys Leu Thr Arg Met Leu
 50 55 60
 Thr Phe Lys Phe Tyr Met Pro Lys Lys Ala Thr Glu Leu Lys His Leu
 65 70 75 80
 Gln Cys Leu Glu Glu Glu Leu Lys Pro Leu Glu Glu Val Leu Asn Leu
 85 90 95
 Ala Gln Ser Lys Asn Phe His Leu Arg Pro Arg Asp Leu Ile Ser Asn
 100 105 110
 Ile Asn Val Ile Val Leu Glu Leu Lys Gly Ser Glu Thr Thr Phe Met
 115 120 125
 Cys Glu Tyr Ala Asp Glu Thr Ala Thr Ile Val Glu Phe Leu Asn Arg
 130 135 140
 Trp Ile Thr Phe Cys Gln Ser Ile Ile Ser Thr Leu Thr Asp Ala His
 145 150 155 160
 Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe

| 165 | | | | | | | | | | 170 | | | | | 175 | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| Lys | Ala | Leu | Val | Leu | Ile | Ala | Phe | Ala | Gln | Tyr | Leu | Gln | Gln | Cys | Pro | | | | |
| | | | 180 | | | | | 185 | | | | | 190 | | | | | | |
| Phe | Glu | Asp | His | Val | Lys | Leu | Val | Asn | Glu | Val | Thr | Glu | Phe | Ala | Lys | | | | |
| | | 195 | | | | | 200 | | | | | 205 | | | | | | | |
| Thr | Cys | Val | Ala | Asp | Glu | Ser | Ala | Glu | Asn | Cys | Asp | Lys | Ser | Leu | His | | | | |
| | 210 | | | | | 215 | | | | | 220 | | | | | | | | |
| Thr | Leu | Phe | Gly | Asp | Lys | Leu | Cys | Thr | Val | Ala | Thr | Leu | Arg | Glu | Thr | | | | |
| | 225 | | | | 230 | | | | | 235 | | | | | 240 | | | | |
| Tyr | Gly | Glu | Met | Ala | Asp | Cys | Cys | Ala | Lys | Gln | Glu | Pro | Glu | Arg | Asn | | | | |
| | | | | 245 | | | | | 250 | | | | | 255 | | | | | |
| Glu | Cys | Phe | Leu | Gln | His | Lys | Asp | Asp | Asn | Pro | Asn | Leu | Pro | Arg | Leu | | | | |
| | | | 260 | | | | | 265 | | | | | 270 | | | | | | |
| Val | Arg | Pro | Glu | Val | Asp | Val | Met | Cys | Thr | Ala | Phe | His | Asp | Asn | Glu | | | | |
| | | 275 | | | | | 280 | | | | | 285 | | | | | | | |
| Glu | Thr | Phe | Leu | Lys | Lys | Tyr | Leu | Tyr | Glu | Ile | Ala | Arg | Arg | His | Pro | | | | |
| | 290 | | | | | 295 | | | | | 300 | | | | | | | | |
| Tyr | Phe | Tyr | Ala | Pro | Glu | Leu | Leu | Phe | Phe | Ala | Lys | Arg | Tyr | Lys | Ala | | | | |
| | 305 | | | | 310 | | | | | 315 | | | | | 320 | | | | |
| Ala | Phe | Thr | Glu | Cys | Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala | Cys | Leu | Leu | | | | |
| | | | | 325 | | | | | 330 | | | | | 335 | | | | | |
| Pro | Lys | Leu | Asp | Glu | Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser | Ser | Ala | Lys | | | | |
| | | | 340 | | | | | 345 | | | | | 350 | | | | | | |
| Gln | Arg | Leu | Lys | Cys | Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe | | | | |
| | | 355 | | | | | 360 | | | | | 365 | | | | | | | |
| Lys | Ala | Trp | Ala | Val | Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu | | | | |
| | | 370 | | | | 375 | | | | | 380 | | | | | | | | |
| Phe | Ala | Glu | Val | Ser | Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | Val | His | Thr | | | | |
| | 385 | | | | 390 | | | | | 395 | | | | | 400 | | | | |
| Glu | Cys | Cys | His | Gly | Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | Arg | Ala | Asp | | | | |
| | | | | 405 | | | | | 410 | | | | | 415 | | | | | |
| Leu | Ala | Lys | Tyr | Ile | Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu | | | | |
| | | | 420 | | | | | 425 | | | | | 430 | | | | | | |
| Lys | Glu | Cys | Cys | Glu | Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | Cys | Ile | Ala | | | | |
| | | 435 | | | | | 440 | | | | | 445 | | | | | | | |
| Glu | Val | Glu | Asn | Asp | Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | Leu | Ala | Ala | | | | |
| | | 450 | | | | 455 | | | | | 460 | | | | | | | | |
| Asp | Phe | Val | Glu | Ser | Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys | | | | |
| | | | | | 470 | | | | | 475 | | | | | 480 | | | | |
| Asp | Val | Phe | Leu | Gly | Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | Arg | His | Pro | | | | |
| | | | | 485 | | | | | 490 | | | | | 495 | | | | | |
| Asp | Tyr | Ser | Val | Val | Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | Tyr | Glu | Thr | | | | |

| 500 | | | | | 505 | | | | | 510 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Leu | Glu | Lys | Cys | Cys | Ala | Ala | Ala | Asp | Pro | His | Glu | Cys | Tyr | Ala |
| | | 515 | | | | | | 520 | | | | | 525 | | |
| Lys | Val | Phe | Asp | Glu | Phe | Lys | Pro | Leu | Val | Glu | Glu | Pro | Gln | Asn | Leu |
| | | 530 | | | | | 535 | | | | | | 540 | | |
| Ile | Lys | Gln | Asn | Cys | Glu | Leu | Phe | Glu | Gln | Leu | Gly | Glu | Tyr | Lys | Phe |
| | | 545 | | | | 550 | | | | | 555 | | | | 560 |
| Gln | Asn | Ala | Leu | Leu | Val | Arg | Tyr | Thr | Lys | Lys | Val | Pro | Gln | Val | Ser |
| | | | | | 565 | | | | | 570 | | | | | 575 |
| Thr | Pro | Thr | Leu | Val | Glu | Val | Ser | Arg | Asn | Leu | Gly | Lys | Val | Gly | Ser |
| | | | | 580 | | | | | 585 | | | | | 590 | |
| Lys | Cys | Cys | Lys | His | Pro | Glu | Ala | Lys | Arg | Met | Pro | Cys | Ala | Glu | Asp |
| | | | | 595 | | | | 600 | | | | | 605 | | |
| Tyr | Leu | Ser | Val | Val | Leu | Asn | Gln | Leu | Cys | Val | Leu | His | Glu | Lys | Thr |
| | | 610 | | | | | 615 | | | | | | 620 | | |
| Pro | Val | Ser | Asp | Arg | Val | Thr | Lys | Cys | Cys | Thr | Glu | Ser | Leu | Val | Asn |
| | | | | | | 630 | | | | | 635 | | | | 640 |
| Arg | Arg | Pro | Cys | Phe | Ser | Ala | Leu | Glu | Val | Asp | Glu | Thr | Tyr | Val | Pro |
| | | | | | | 645 | | | | 650 | | | | | 655 |
| Lys | Glu | Phe | Asn | Ala | Glu | Thr | Phe | Thr | Phe | His | Ala | Asp | Ile | Cys | Thr |
| | | | | | 660 | | | | 665 | | | | | 670 | |
| Leu | Ser | Glu | Lys | Glu | Arg | Gln | Ile | Lys | Lys | Gln | Thr | Ala | Leu | Val | Glu |
| | | | 675 | | | | | 680 | | | | | 685 | | |
| Leu | Val | Lys | His | Lys | Pro | Lys | Ala | Thr | Lys | Glu | Gln | Leu | Lys | Ala | Val |
| | | | | | | | 695 | | | | | 700 | | | |
| Met | Asp | Asp | Phe | Ala | Ala | Phe | Val | Glu | Lys | Cys | Cys | Lys | Ala | Asp | Asp |
| | | | | | | | 710 | | | | 715 | | | | 720 |
| Lys | Glu | Thr | Cys | Phe | Ala | Glu | Glu | Gly | Lys | Lys | Leu | Val | Ala | Ala | Ser |
| | | | | | | 725 | | | | 730 | | | | | 735 |
| Gln | Ala | Ala | Leu | Gly | Leu | | | | | | | | | | |
| | | | | | | 740 | | | | | | | | | |

<210> 320

<211> 742

<212> PRT

<213> Homo sapiens

<400> 320

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Lys | Trp | Val | Ser | Phe | Ile | Ser | Leu | Leu | Phe | Leu | Phe | Ser | Ser | Ala |
| 1 | | | | | 5 | | | | | 10 | | | | | 15 |
| Tyr | Ser | Arg | Ser | Leu | Asp | Lys | Arg | Asp | Ala | His | Lys | Ser | Glu | Val | Ala |
| | | | | 20 | | | | | 25 | | | | | 30 | |
| His | Arg | Phe | Lys | Asp | Leu | Gly | Glu | Glu | Asn | Phe | Lys | Ala | Leu | Val | Leu |
| | | | 35 | | | | | 40 | | | | | 45 | | |

Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
 50 55 60
 Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
 65 70 75 80
 Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
 85 90 95
 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
 100 105 110
 Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln
 115 120 125
 His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
 130 135 140
 Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys
 145 150 155 160
 Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro
 165 170 175
 Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys
 180 185 190
 Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu
 195 200 205
 Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys
 210 215 220
 Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val
 225 230 235 240
 Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser
 245 250 255
 Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly
 260 265 270
 Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile
 275 280 285
 Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu
 290 295 300
 Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp
 305 310 315 320
 Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser
 325 330 335
 Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly
 340 345 350
 Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val
 355 360 365
 Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys
 370 375 380

Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu
385 390 395 400
Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys
405 410 415
Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu
420 425 430
Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val
435 440 445
Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His
450 455 460
Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val
465 470 475 480
Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg
485 490 495
Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe
500 505 510
Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala
515 520 525
Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu
530 535 540
Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys
545 550 555 560
Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala
565 570 575
Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe
580 585 590
Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
595 600 605
Leu Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu
610 615 620
His Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr
625 630 635 640
Lys Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro
645 650 655
Lys Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu
660 665 670
Lys Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His
675 680 685
Leu Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu
690 695 700
Leu Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr
705 710 715 720

Ala Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Cys Gln Ser
725 730 735

Ile Ile Ser Thr Leu Thr
740

<210> 321

<211> 771

<212> PRT

<213> Homo sapiens

<400> 321

Met Lys Val Ser Val Ala Ala Leu Ser Cys Leu Met Leu Val Thr Ala
1 5 10 15

Leu Gly Ser Gln Ala Ala Pro Pro Arg Leu Ile Cys Asp Ser Arg Val
20 25 30

Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu Ala Glu Asn Ile Thr Thr
35 40 45

Gly Cys Ala Glu His Cys Ser Leu Asn Glu Asn Ile Thr Val Pro Asp
50 55 60

Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg Met Glu Val Gly Gln Gln
65 70 75 80

Ala Val Glu Val Trp Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu
85 90 95

Arg Gly Gln Ala Leu Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu
100 105 110

Gln Leu His Val Asp Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr
115 120 125

Leu Leu Arg Ala Leu Arg Ala Gln Lys Glu Ala Ile Ser Pro Pro Asp
130 135 140

Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg
145 150 155 160

Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu Arg Gly Lys Leu Lys Leu
165 170 175

Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp Asp Ala His Lys Ser Glu
180 185 190

Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu
195 200 205

Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp
210 215 220

His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val
225 230 235 240

Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe
245 250 255

Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu
 260 265 270
 Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe
 275 280 285
 Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro
 290 295 300
 Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe
 305 310 315 320
 Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr
 325 330 335
 Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr
 340 345 350
 Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu
 355 360 365
 Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu
 370 375 380
 Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp
 385 390 395 400
 Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu
 405 410 415
 Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys
 420 425 430
 His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys
 435 440 445
 Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys
 450 455 460
 Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu
 465 470 475 480
 Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val
 485 490 495
 Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe
 500 505 510
 Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser
 515 520 525
 Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu
 530 535 540
 Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe
 545 550 555 560
 Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln
 565 570 575
 Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala
 580 585 590

Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr
 595 600 605
 Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys
 610 615 620
 Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser
 625 630 635 640
 Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser
 645 650 655
 Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro
 660 665 670
 Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe
 675 680 685
 Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu
 690 695 700
 Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys
 705 710 715 720
 His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp
 725 730 735
 Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr
 740 745 750
 Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala
 755 760 765
 Leu Gly Leu
 770

<210> 322
 <211> 772
 <212> PRT
 <213> Homo sapiens

<220>
 <221> SITE
 <222> (240)
 <223> Xaa equals any of the naturally occurring L-amino acids

<220>
 <221> SITE
 <222> (270)
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 322
 Met Thr Asn Lys Cys Leu Leu Gln Ile Ala Leu Leu Leu Cys Phe Ser
 1 5 10 15
 Thr Thr Ala Leu Ser Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg
 20 25 30
 Ser Ser Asn Phe Gln Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg
 35 40 45

Leu Glu Tyr Cys Leu Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu
 50 55 60
 Ile Lys Gln Leu Gln Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile
 65 70 75 80
 Tyr Glu Met Leu Gln Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser
 85 90 95
 Ser Thr Gly Trp Asn Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val
 100 105 110
 Tyr His Gln Ile Asn His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu
 115 120 125
 Lys Glu Asp Phe Thr Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys
 130 135 140
 Arg Tyr Tyr Gly Arg Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser
 145 150 155 160
 His Cys Ala Trp Thr Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr
 165 170 175
 Phe Ile Asn Arg Leu Thr Gly Tyr Leu Arg Asn Asp Ala His Lys Ser
 180 185 190
 Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala
 195 200 205
 Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu
 210 215 220
 Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Xaa
 225 230 235 240
 Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu
 245 250 255
 Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Xaa Tyr Gly
 260 265 270
 Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys
 275 280 285
 Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg
 290 295 300
 Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr
 305 310 315 320
 Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe
 325 330 335
 Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe
 340 345 350
 Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys
 355 360 365
 Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg
 370 375 380

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| Leu | Lys | Cys | Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe | Lys | Ala | | |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 | | |
| Trp | Ala | Val | Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu | Phe | Ala | | |
| | | | | 405 | | | | | 410 | | | | | 415 | | | |
| Glu | Val | Ser | Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | Val | His | Thr | Glu | Cys | | |
| | | | 420 | | | | | 425 | | | | | 430 | | | | |
| Cys | His | Gly | Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | Arg | Ala | Asp | Leu | Ala | | |
| | | 435 | | | | | 440 | | | | | 445 | | | | | |
| Lys | Tyr | Ile | Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu | Lys | Glu | | |
| | 450 | | | | | 455 | | | | | 460 | | | | | | |
| Cys | Cys | Glu | Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | Cys | Ile | Ala | Glu | Val | | |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 | | |
| Glu | Asn | Asp | Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | Leu | Ala | Ala | Asp | Phe | | |
| | | | | 485 | | | | | 490 | | | | | 495 | | | |
| Val | Glu | Ser | Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys | Asp | Val | | |
| | | | 500 | | | | | 505 | | | | | 510 | | | | |
| Phe | Leu | Gly | Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | Arg | His | Pro | Asp | Tyr | | |
| | | 515 | | | | | 520 | | | | | 525 | | | | | |
| Ser | Val | Val | Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | Tyr | Glu | Thr | Thr | Leu | | |
| | 530 | | | | | 535 | | | | | 540 | | | | | | |
| Glu | Lys | Cys | Cys | Ala | Ala | Ala | Asp | Pro | His | Glu | Cys | Tyr | Ala | Lys | Val | | |
| 545 | | | | 550 | | | | | | 555 | | | | | 560 | | |
| Phe | Asp | Glu | Phe | Lys | Pro | Leu | Val | Glu | Glu | Pro | Gln | Asn | Leu | Ile | Lys | | |
| | | | | 565 | | | | | 570 | | | | | 575 | | | |
| Gln | Asn | Cys | Glu | Leu | Phe | Glu | Gln | Leu | Gly | Glu | Tyr | Lys | Phe | Gln | Asn | | |
| | | | 580 | | | | | 585 | | | | | 590 | | | | |
| Ala | Leu | Leu | Val | Arg | Tyr | Thr | Lys | Lys | Val | Pro | Gln | Val | Ser | Thr | Pro | | |
| | 595 | | | | | | 600 | | | | | 605 | | | | | |
| Thr | Leu | Val | Glu | Val | Ser | Arg | Asn | Leu | Gly | Lys | Val | Gly | Ser | Lys | Cys | | |
| | 610 | | | | | 615 | | | | | 620 | | | | | | |
| Cys | Lys | His | Pro | Glu | Ala | Lys | Arg | Met | Pro | Cys | Ala | Glu | Asp | Tyr | Leu | | |
| 625 | | | | 630 | | | | | | 635 | | | | | 640 | | |
| Ser | Val | Val | Leu | Asn | Gln | Leu | Cys | Val | Leu | His | Glu | Lys | Thr | Pro | Val | | |
| | | | 645 | | | | | 650 | | | | | | 655 | | | |
| Ser | Asp | Arg | Val | Thr | Lys | Cys | Cys | Thr | Glu | Ser | Leu | Val | Asn | Arg | Arg | | |
| | | | 660 | | | | | 665 | | | | | 670 | | | | |
| Pro | Cys | Phe | Ser | Ala | Leu | Glu | Val | Asp | Glu | Thr | Tyr | Val | Pro | Lys | Glu | | |
| | | 675 | | | | | 680 | | | | | 685 | | | | | |
| Phe | Asn | Ala | Glu | Thr | Phe | Thr | Phe | His | Ala | Asp | Ile | Cys | Thr | Leu | Ser | | |
| | 690 | | | | | 695 | | | | | 700 | | | | | | |
| Glu | Lys | Glu | Arg | Gln | Ile | Lys | Lys | Gln | Thr | Ala | Leu | Val | Glu | Leu | Val | | |
| 705 | | | | 710 | | | | | | 715 | | | | | 720 | | |

Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp
 725 730 735
 Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu
 740 745 750
 Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala
 755 760 765
 Ala Leu Gly Leu
 770

<210> 323
 <211> 775
 <212> PRT
 <213> Homo sapiens

<220>
 <221> SITE
 <222> (487)
 <223> Xaa equals any of the naturally occurring L-amino acids

<400> 323
 Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1 5 10 15
 Tyr Ser Arg Gly Val Phe Arg Arg Asp Ala His Lys Ser Glu Val Ala
 20 25 30
 His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
 35 40 45
 Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
 50 55 60
 Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
 65 70 75 80
 Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
 85 90 95
 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
 100 105 110
 Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln
 115 120 125
 His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
 130 135 140
 Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys
 145 150 155 160
 Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro
 165 170 175
 Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys
 180 185 190
 Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu
 195 200 205

Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys
 210 215 220
 Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val
 225 230 235 240
 Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser
 245 250 255
 Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly
 260 265 270
 Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile
 275 280 285
 Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu
 290 295 300
 Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp
 305 310 315 320
 Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser
 325 330 335
 Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly
 340 345 350
 Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val
 355 360 365
 Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys
 370 375 380
 Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu
 385 390 395 400
 Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys
 405 410 415
 Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu
 420 425 430
 Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val
 435 440 445
 Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His
 450 455 460
 Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val
 465 470 475 480
 Leu Asn Gln Leu Cys Val Xaa His Glu Lys Thr Pro Val Ser Asp Arg
 485 490 495
 Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe
 500 505 510
 Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala
 515 520 525
 Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu
 530 535 540

Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys
 545 550 555 560
 Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala
 565 570 575
 Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe
 580 585 590
 Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
 595 600 605
 Leu Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe
 610 615 620
 Gln Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys
 625 630 635 640
 Leu Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu
 645 650 655
 Gln Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu
 660 665 670
 Gln Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp
 675 680 685
 Asn Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile
 690 695 700
 Asn His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe
 705 710 715 720
 Thr Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly
 725 730 735
 Arg Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp
 740 745 750
 Thr Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg
 755 760 765
 Leu Thr Gly Tyr Leu Arg Asn
 770 775

<210> 324
 <211> 729
 <212> PRT
 <213> Homo sapiens

<400> 324
 Met Trp Leu Gln Ser Leu Leu Leu Leu Gly Thr Val Ala Cys Ser Ile
 1 5 10 15
 Ser Ala Pro Ala Arg Ser Pro Ser Pro Ser Thr Gln Pro Trp Glu His
 20 25 30
 Val Asn Ala Ile Gln Glu Ala Arg Arg Leu Leu Asn Leu Ser Arg Asp
 35 40 45

Thr Ala Ala Glu Met Asn Glu Thr Val Glu Val Ile Ser Glu Met Phe
 50 55 60
 Asp Leu Gln Glu Pro Thr Cys Leu Gln Thr Arg Leu Glu Leu Tyr Lys
 65 70 75 80
 Gln Gly Leu Arg Gly Ser Leu Thr Lys Leu Lys Gly Pro Leu Thr Met
 85 90 95
 Met Ala Ser His Tyr Lys Gln His Cys Pro Pro Thr Pro Glu Thr Ser
 100 105 110
 Cys Ala Thr Gln Ile Ile Thr Phe Glu Ser Phe Lys Glu Asn Leu Lys
 115 120 125
 Asp Phe Leu Leu Val Ile Pro Phe Asp Cys Trp Glu Pro Val Gln Glu
 130 135 140
 Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu
 145 150 155 160
 Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln
 165 170 175
 Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu
 180 185 190
 Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys
 195 200 205
 Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu
 210 215 220
 Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro
 225 230 235 240
 Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu
 245 250 255
 Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His
 260 265 270
 Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg
 275 280 285
 Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg
 290 295 300
 Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala
 305 310 315 320
 Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser
 325 330 335
 Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu
 340 345 350
 Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro
 355 360 365
 Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys
 370 375 380

Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp
385 390 395 400
Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser
405 410 415
Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His
420 425 430
Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser
435 440 445
Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala
450 455 460
Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg
465 470 475 480
Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr
485 490 495
Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu
500 505 510
Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro
515 520 525
Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu
530 535 540
Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro
545 550 555 560
Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys
565 570 575
Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys
580 585 590
Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His
595 600 605
Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser
610 615 620
Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr
625 630 635 640
Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp
645 650 655
Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala
660 665 670
Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu
675 680 685
Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys
690 695 700
Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val
705 710 715 720

Ala Ala Ser Gln Ala Ala Leu Gly Leu
725

<210> 325
<211> 736
<212> PRT
<213> Homo sapiens

<400> 325
Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
1 5 10 15
Tyr Ser Arg Gly Val Phe Arg Arg Asp Ala His Lys Ser Glu Val Ala
20 25 30
His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
35 40 45
Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
50 55 60
Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
65 70 75 80
Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
85 90 95
Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
100 105 110
Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln
115 120 125
His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
130 135 140
Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys
145 150 155 160
Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro
165 170 175
Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys
180 185 190
Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu
195 200 205
Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys
210 215 220
Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val
225 230 235 240
Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser
245 250 255
Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly
260 265 270
Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile

| 275 | | | | | 280 | | | | | 285 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu | Lys | Glu | Cys | Cys | Glu |
| 290 | | | | | 295 | | | | | 300 | | | | | |
| Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | Cys | Ile | Ala | Glu | Val | Glu | Asn | Asp |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | Leu | Ala | Ala | Asp | Phe | Val | Glu | Ser |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys | Asp | Val | Phe | Leu | Gly |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | Arg | His | Pro | Asp | Tyr | Ser | Val | Val |
| | | 355 | | | | | 360 | | | | | 365 | | | |
| Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | Tyr | Glu | Thr | Thr | Leu | Glu | Lys | Cys |
| | | 370 | | | | 375 | | | | | 380 | | | | |
| Cys | Ala | Ala | Ala | Asp | Pro | His | Glu | Cys | Tyr | Ala | Lys | Val | Phe | Asp | Glu |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Phe | Lys | Pro | Leu | Val | Glu | Glu | Pro | Gln | Asn | Leu | Ile | Lys | Gln | Asn | Cys |
| | | | 405 | | | | | 410 | | | | | | 415 | |
| Glu | Leu | Phe | Glu | Gln | Leu | Gly | Glu | Tyr | Lys | Phe | Gln | Asn | Ala | Leu | Leu |
| | | | 420 | | | | 425 | | | | | | 430 | | |
| Val | Arg | Tyr | Thr | Lys | Lys | Val | Pro | Gln | Val | Ser | Thr | Pro | Thr | Leu | Val |
| | | 435 | | | | | 440 | | | | | 445 | | | |
| Glu | Val | Ser | Arg | Asn | Leu | Gly | Lys | Val | Gly | Ser | Lys | Cys | Cys | Lys | His |
| | 450 | | | | | 455 | | | | | 460 | | | | |
| Pro | Glu | Ala | Lys | Arg | Met | Pro | Cys | Ala | Glu | Asp | Tyr | Leu | Ser | Val | Val |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 |
| Leu | Asn | Gln | Leu | Cys | Val | Leu | His | Glu | Lys | Thr | Pro | Val | Ser | Asp | Arg |
| | | | 485 | | | | | 490 | | | | | | 495 | |
| Val | Thr | Lys | Cys | Cys | Thr | Glu | Ser | Leu | Val | Asn | Arg | Arg | Pro | Cys | Phe |
| | | | 500 | | | | | 505 | | | | | 510 | | |
| Ser | Ala | Leu | Glu | Val | Asp | Glu | Thr | Tyr | Val | Pro | Lys | Glu | Phe | Asn | Ala |
| | | 515 | | | | | 520 | | | | | 525 | | | |
| Glu | Thr | Phe | Thr | Phe | His | Ala | Asp | Ile | Cys | Thr | Leu | Ser | Glu | Lys | Glu |
| | 530 | | | | | 535 | | | | | 540 | | | | |
| Arg | Gln | Ile | Lys | Lys | Gln | Thr | Ala | Leu | Val | Glu | Leu | Val | Lys | His | Lys |
| 545 | | | | | 550 | | | | | 555 | | | | | 560 |
| Pro | Lys | Ala | Thr | Lys | Glu | Gln | Leu | Lys | Ala | Val | Met | Asp | Asp | Phe | Ala |
| | | | 565 | | | | | | 570 | | | | | 575 | |
| Ala | Phe | Val | Glu | Lys | Cys | Cys | Lys | Ala | Asp | Asp | Lys | Glu | Thr | Cys | Phe |
| | | | 580 | | | | | 585 | | | | | 590 | | |
| Ala | Glu | Glu | Gly | Lys | Lys | Leu | Val | Ala | Ala | Ser | Gln | Ala | Ala | Leu | Gly |
| | | 595 | | | | | 600 | | | | | 605 | | | |
| Leu | Ala | Pro | Ala | Arg | Ser | Pro | Ser | Pro | Ser | Thr | Gln | Pro | Trp | Glu | His |

| 610 | 615 | 620 |
|--|-----|-----|
| Val Asn Ala Ile Gln Glu Ala Arg Arg Leu Leu Asn Leu Ser Arg Asp 625 630 635 640 | | |
| Thr Ala Ala Glu Met Asn Glu Thr Val Glu Val Ile Ser Glu Met Phe 645 650 655 | | |
| Asp Leu Gln Glu Pro Thr Cys Leu Gln Thr Arg Leu Glu Leu Tyr Lys 660 665 670 | | |
| Gln Gly Leu Arg Gly Ser Leu Thr Lys Leu Lys Gly Pro Leu Thr Met 675 680 685 | | |
| Met Ala Ser His Tyr Lys Gln His Cys Pro Pro Thr Pro Glu Thr Ser 690 695 700 | | |
| Cys Ala Thr Gln Ile Ile Thr Phe Glu Ser Phe Lys Glu Asn Leu Lys 705 710 715 720 | | |
| Asp Phe Leu Leu Val Ile Pro Phe Asp Cys Trp Glu Pro Val Gln Glu 725 730 735 | | |

<210> 326
 <211> 986
 <212> PRT
 <213> Homo sapiens

| <400> 326 |
|--|
| Met Asn Lys Leu Leu Cys Cys Ala Leu Val Phe Leu Asp Ile Ser Ile 1 5 10 15 |
| Lys Trp Thr Thr Gln Glu Thr Phe Pro Pro Lys Tyr Leu His Tyr Asp 20 25 30 |
| Glu Glu Thr Ser His Gln Leu Leu Cys Asp Lys Cys Pro Pro Gly Thr 35 40 45 |
| Tyr Leu Lys Gln His Cys Thr Ala Lys Trp Lys Thr Val Cys Ala Pro 50 55 60 |
| Cys Pro Asp His Tyr Tyr Thr Asp Ser Trp His Thr Ser Asp Glu Cys 65 70 75 80 |
| Leu Tyr Cys Ser Pro Val Cys Lys Glu Leu Gln Tyr Val Lys Gln Glu 85 90 95 |
| Cys Asn Arg Thr His Asn Arg Val Cys Glu Cys Lys Glu Gly Arg Tyr 100 105 110 |
| Leu Glu Ile Glu Phe Cys Leu Lys His Arg Ser Cys Pro Pro Gly Phe 115 120 125 |
| Gly Val Val Gln Ala Gly Thr Pro Glu Arg Asn Thr Val Cys Lys Arg 130 135 140 |
| Cys Pro Asp Gly Phe Phe Ser Asn Glu Thr Ser Ser Lys Ala Pro Cys 145 150 155 160 |

Arg Lys His Thr Asn Cys Ser Val Phe Gly Leu Leu Leu Thr Gln Lys
 165 170 175
 Gly Asn Ala Thr His Asp Asn Ile Cys Ser Gly Asn Ser Glu Ser Thr
 180 185 190
 Gln Lys Cys Gly Ile Asp Val Thr Leu Cys Glu Glu Ala Phe Phe Arg
 195 200 205
 Phe Ala Val Pro Thr Lys Phe Thr Pro Asn Trp Leu Ser Val Leu Val
 210 215 220
 Asp Asn Leu Pro Gly Thr Lys Val Asn Ala Glu Ser Val Glu Arg Ile
 225 230 235 240
 Lys Arg Gln His Ser Ser Gln Glu Gln Thr Phe Gln Leu Leu Lys Leu
 245 250 255
 Trp Lys His Gln Asn Lys Asp Gln Asp Ile Val Lys Lys Ile Ile Gln
 260 265 270
 Asp Ile Asp Leu Cys Glu Asn Ser Val Gln Arg His Ile Gly His Ala
 275 280 285
 Asn Leu Thr Phe Glu Gln Leu Arg Ser Leu Met Glu Ser Leu Pro Gly
 290 295 300
 Lys Lys Val Gly Ala Glu Asp Ile Glu Lys Thr Ile Lys Ala Cys Lys
 305 310 315 320
 Pro Ser Asp Gln Ile Leu Lys Leu Leu Ser Leu Trp Arg Ile Lys Asn
 325 330 335
 Gly Asp Gln Asp Thr Leu Lys Gly Leu Met His Ala Leu Lys His Ser
 340 345 350
 Lys Thr Tyr His Phe Pro Lys Thr Val Thr Gln Ser Leu Lys Lys Thr
 355 360 365
 Ile Arg Phe Leu His Ser Phe Thr Met Tyr Lys Leu Tyr Gln Lys Leu
 370 375 380
 Phe Leu Glu Met Ile Gly Asn Gln Val Gln Ser Val Lys Ile Ser Cys
 385 390 395 400
 Leu Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly
 405 410 415
 Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu
 420 425 430
 Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr
 435 440 445
 Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp
 450 455 460
 Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr
 465 470 475 480
 Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu
 485 490 495

Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn
 500 505 510
 Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe
 515 520 525
 His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala
 530 535 540
 Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys
 545 550 555 560
 Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala
 565 570 575
 Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala
 580 585 590
 Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly
 595 600 605
 Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe
 610 615 620
 Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr
 625 630 635 640
 Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp
 645 650 655
 Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile
 660 665 670
 Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser
 675 680 685
 His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro
 690 695 700
 Ser Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr
 705 710 715 720
 Ala Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala
 725 730 735
 Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys
 740 745 750
 Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Asp Pro His
 755 760 765
 Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu
 770 775 780
 Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly
 785 790 795 800
 Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val
 805 810 815
 Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly
 820 825 830

Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro
 835 840 845
 Cys Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu
 850 855 860
 His Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu
 865 870 875 880
 Ser Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu
 885 890 895
 Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala
 900 905 910
 Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr
 915 920 925
 Ala Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln
 930 935 940
 Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys
 945 950 955 960
 Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu
 965 970 975
 Val Ala Ala Ser Gln Ala Ala Leu Gly Leu
 980 985

<210> 327
 <211> 989
 <212> PRT
 <213> Homo sapiens

<400> 327
 Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1 5 10 15
 Tyr Ser Arg Gly Val Phe Arg Arg Asp Ala His Lys Ser Glu Val Ala
 20 25 30
 His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
 35 40 45
 Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
 50 55 60
 Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
 65 70 75 80
 Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
 85 90 95
 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
 100 105 110
 Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln
 115 120 125

His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
 130 135 140
 Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys
 145 150 155 160
 Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro
 165 170 175
 Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys
 180 185 190
 Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu
 195 200 205
 Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys
 210 215 220
 Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val
 225 230 235 240
 Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser
 245 250 255
 Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly
 260 265 270
 Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile
 275 280 285
 Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu
 290 295 300
 Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp
 305 310 315 320
 Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser
 325 330 335
 Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly
 340 345 350
 Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val
 355 360 365
 Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys
 370 375 380
 Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu
 385 390 395 400
 Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys
 405 410 415
 Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu
 420 425 430
 Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val
 435 440 445
 Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His
 450 455 460

| | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pro | Glu | Ala | Lys | Arg | Met | Pro | Cys | Ala | Glu | Asp | Tyr | Leu | Ser | Val | Val | 465 | 470 | 475 | 480 |
| Leu | Asn | Gln | Leu | Cys | Val | Leu | His | Glu | Lys | Thr | Pro | Val | Ser | Asp | Arg | 485 | 490 | 495 | |
| Val | Thr | Lys | Cys | Cys | Thr | Glu | Ser | Leu | Val | Asn | Arg | Arg | Pro | Cys | Phe | 500 | 505 | 510 | |
| Ser | Ala | Leu | Glu | Val | Asp | Glu | Thr | Tyr | Val | Pro | Lys | Glu | Phe | Asn | Ala | 515 | 520 | 525 | |
| Glu | Thr | Phe | Thr | Phe | His | Ala | Asp | Ile | Cys | Thr | Leu | Ser | Glu | Lys | Glu | 530 | 535 | 540 | |
| Arg | Gln | Ile | Lys | Lys | Gln | Thr | Ala | Leu | Val | Glu | Leu | Val | Lys | His | Lys | 545 | 550 | 555 | 560 |
| Pro | Lys | Ala | Thr | Lys | Glu | Gln | Leu | Lys | Ala | Val | Met | Asp | Asp | Phe | Ala | 565 | 570 | 575 | |
| Ala | Phe | Val | Glu | Lys | Cys | Cys | Lys | Ala | Asp | Asp | Lys | Glu | Thr | Cys | Phe | 580 | 585 | 590 | |
| Ala | Glu | Glu | Gly | Lys | Lys | Leu | Val | Ala | Ala | Ser | Gln | Ala | Ala | Leu | Gly | 595 | 600 | 605 | |
| Leu | Glu | Thr | Phe | Pro | Pro | Lys | Tyr | Leu | His | Tyr | Asp | Glu | Glu | Thr | Ser | 610 | 615 | 620 | |
| His | Gln | Leu | Leu | Cys | Asp | Lys | Cys | Pro | Pro | Gly | Thr | Tyr | Leu | Lys | Gln | 625 | 630 | 635 | 640 |
| His | Cys | Thr | Ala | Lys | Trp | Lys | Thr | Val | Cys | Ala | Pro | Cys | Pro | Asp | His | 645 | 650 | 655 | |
| Tyr | Tyr | Thr | Asp | Ser | Trp | His | Thr | Ser | Asp | Glu | Cys | Leu | Tyr | Cys | Ser | 660 | 665 | 670 | |
| Pro | Val | Cys | Lys | Glu | Leu | Gln | Tyr | Val | Lys | Gln | Glu | Cys | Asn | Arg | Thr | 675 | 680 | 685 | |
| His | Asn | Arg | Val | Cys | Glu | Cys | Lys | Glu | Gly | Arg | Tyr | Leu | Glu | Ile | Glu | 690 | 695 | 700 | |
| Phe | Cys | Leu | Lys | His | Arg | Ser | Cys | Pro | Pro | Gly | Phe | Gly | Val | Val | Gln | 705 | 710 | 715 | 720 |
| Ala | Gly | Thr | Pro | Glu | Arg | Asn | Thr | Val | Cys | Lys | Arg | Cys | Pro | Asp | Gly | 725 | 730 | 735 | |
| Phe | Phe | Ser | Asn | Glu | Thr | Ser | Ser | Lys | Ala | Pro | Cys | Arg | Lys | His | Thr | 740 | 745 | 750 | |
| Asn | Cys | Ser | Val | Phe | Gly | Leu | Leu | Leu | Thr | Gln | Lys | Gly | Asn | Ala | Thr | 755 | 760 | 765 | |
| His | Asp | Asn | Ile | Cys | Ser | Gly | Asn | Ser | Glu | Ser | Thr | Gln | Lys | Cys | Gly | 770 | 775 | 780 | |
| Ile | Asp | Val | Thr | Leu | Cys | Glu | Glu | Ala | Phe | Phe | Arg | Phe | Ala | Val | Pro | 785 | 790 | 795 | 800 |

Thr Lys Phe Thr Pro Asn Trp Leu Ser Val Leu Val Asp Asn Leu Pro
 805 810 815
 Gly Thr Lys Val Asn Ala Glu Ser Val Glu Arg Ile Lys Arg Gln His
 820 825 830
 Ser Ser Gln Glu Gln Thr Phe Gln Leu Leu Lys Leu Trp Lys His Gln
 835 840 845
 Asn Lys Asp Gln Asp Ile Val Lys Lys Ile Ile Gln Asp Ile Asp Leu
 850 855 860
 Cys Glu Asn Ser Val Gln Arg His Ile Gly His Ala Asn Leu Thr Phe
 865 870 875 880
 Glu Gln Leu Arg Ser Leu Met Glu Ser Leu Pro Gly Lys Lys Val Gly
 885 890 895
 Ala Glu Asp Ile Glu Lys Thr Ile Lys Ala Cys Lys Pro Ser Asp Gln
 900 905 910
 Ile Leu Lys Leu Leu Ser Leu Trp Arg Ile Lys Asn Gly Asp Gln Asp
 915 920 925
 Thr Leu Lys Gly Leu Met His Ala Leu Lys His Ser Lys Thr Tyr His
 930 935 940
 Phe Pro Lys Thr Val Thr Gln Ser Leu Lys Lys Thr Ile Arg Phe Leu
 945 950 955 960
 His Ser Phe Thr Met Tyr Lys Leu Tyr Gln Lys Leu Phe Leu Glu Met
 965 970 975
 Ile Gly Asn Gln Val Gln Ser Val Lys Ile Ser Cys Leu
 980 985

<210> 328
 <211> 761
 <212> PRT
 <213> Homo sapiens

<400> 328
 Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1 5 10 15
 Tyr Ser Arg Gly Val Phe Arg Arg Asp Ala His Lys Ser Glu Val Ala
 20 25 30
 His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
 35 40 45
 Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
 50 55 60
 Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
 65 70 75 80
 Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
 85 90 95
 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala

| 100 | | | | | 105 | | | | | 110 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Cys | Cys | Ala | Lys | Gln | Glu | Pro | Glu | Arg | Asn | Glu | Cys | Phe | Leu | Gln |
| | | 115 | | | | | | 120 | | | | 125 | | | |
| His | Lys | Asp | Asp | Asn | Pro | Asn | Leu | Pro | Arg | Leu | Val | Arg | Pro | Glu | Val |
| | 130 | | | | | | 135 | | | | 140 | | | | |
| Asp | Val | Met | Cys | Thr | Ala | Phe | His | Asp | Asn | Glu | Glu | Thr | Phe | Leu | Lys |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Lys | Tyr | Leu | Tyr | Glu | Ile | Ala | Arg | Arg | His | Pro | Tyr | Phe | Tyr | Ala | Pro |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Glu | Leu | Leu | Phe | Phe | Ala | Lys | Arg | Tyr | Lys | Ala | Ala | Phe | Thr | Glu | Cys |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala | Cys | Leu | Leu | Pro | Lys | Leu | Asp | Glu |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser | Ser | Ala | Lys | Gln | Arg | Leu | Lys | Cys |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe | Lys | Ala | Trp | Ala | Val |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu | Phe | Ala | Glu | Val | Ser |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | Val | His | Thr | Glu | Cys | Cys | His | Gly |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | Arg | Ala | Asp | Leu | Ala | Lys | Tyr | Ile |
| | 275 | | | | | | 280 | | | | | 285 | | | |
| Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu | Lys | Glu | Cys | Cys | Glu |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | Cys | Ile | Ala | Glu | Val | Glu | Asn | Asp |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | Leu | Ala | Ala | Asp | Phe | Val | Glu | Ser |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys | Asp | Val | Phe | Leu | Gly |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | Arg | His | Pro | Asp | Tyr | Ser | Val | Val |
| | 355 | | | | | | 360 | | | | | 365 | | | |
| Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | Tyr | Glu | Thr | Thr | Leu | Glu | Lys | Cys |
| | 370 | | | | | 375 | | | | | 380 | | | | |
| Cys | Ala | Ala | Ala | Asp | Pro | His | Glu | Cys | Tyr | Ala | Lys | Val | Phe | Asp | Glu |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Phe | Lys | Pro | Leu | Val | Glu | Glu | Pro | Gln | Asn | Leu | Ile | Lys | Gln | Asn | Cys |
| | | | | 405 | | | | | 410 | | | | | 415 | |
| Glu | Leu | Phe | Glu | Gln | Leu | Gly | Glu | Tyr | Lys | Phe | Gln | Asn | Ala | Leu | Leu |
| | | | 420 | | | | | 425 | | | | | 430 | | |
| Val | Arg | Tyr | Thr | Lys | Lys | Val | Pro | Gln | Val | Ser | Thr | Pro | Thr | Leu | Val |

| 435 | | | | | 440 | | | | | 445 | | | | |
|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His | 450 | | | | 455 | | | | 460 | | | | | |
| Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val | 465 | | | | 470 | | | | 475 | | | | 480 | |
| Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg | | | | 485 | | | | 490 | | | | 495 | | |
| Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe | | | 500 | | | | 505 | | | | 510 | | | |
| Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala | | 515 | | | | | 520 | | | | 525 | | | |
| Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu | 530 | | | | 535 | | | | 540 | | | | | |
| Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys | 545 | | | | 550 | | | | 555 | | | | 560 | |
| Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala | | | | 565 | | | | 570 | | | | 575 | | |
| Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe | | | 580 | | | | 585 | | | | 590 | | | |
| Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly | | 595 | | | | | 600 | | | | 605 | | | |
| Leu Ala Val Gln Gly Pro Glu Glu Thr Val Thr Gln Asp Cys Leu Gln | | 610 | | | | | 615 | | | | 620 | | | |
| Leu Ile Ala Asp Ser Glu Thr Pro Thr Ile Gln Lys Gly Ser Tyr Thr | 625 | | | | 630 | | | | 635 | | | | 640 | |
| Phe Val Pro Trp Leu Leu Ser Phe Lys Arg Gly Ser Ala Leu Glu Glu | | | | 645 | | | | 650 | | | | 655 | | |
| Lys Glu Asn Lys Ile Leu Val Lys Glu Thr Gly Tyr Phe Phe Ile Tyr | | | 660 | | | | 665 | | | | 670 | | | |
| Gly Gln Val Leu Tyr Thr Asp Lys Thr Tyr Ala Met Gly His Leu Ile | | 675 | | | | | 680 | | | | 685 | | | |
| Gln Arg Lys Lys Val His Val Phe Gly Asp Glu Leu Ser Leu Val Thr | | 690 | | | | 695 | | | 700 | | | | | |
| Leu Phe Arg Cys Ile Gln Asn Met Pro Glu Thr Leu Pro Asn Asn Ser | 705 | | | | 710 | | | | 715 | | | | 720 | |
| Cys Tyr Ser Ala Gly Ile Ala Lys Leu Glu Glu Gly Asp Glu Leu Gln | | | | 725 | | | | 730 | | | | 735 | | |
| Leu Ala Ile Pro Arg Glu Asn Ala Gln Ile Ser Leu Asp Gly Asp Val | | | 740 | | | | 745 | | | | 750 | | | |
| Thr Phe Phe Gly Ala Leu Lys Leu Leu | | 755 | | | | | 760 | | | | | | | |

<210> 329
 <211> 758
 <212> PRT
 <213> Homo sapiens

<400> 329

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Lys | Val | Ser | Val | Ala | Ala | Leu | Ser | Cys | Leu | Met | Leu | Val | Thr | Ala |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Leu | Gly | Ser | Gln | Ala | Ala | Val | Gln | Gly | Pro | Glu | Glu | Thr | Val | Thr | Gln |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Asp | Cys | Leu | Gln | Leu | Ile | Ala | Asp | Ser | Glu | Thr | Pro | Thr | Ile | Gln | Lys |
| | 35 | | | | | | 40 | | | | | 45 | | | |
| Gly | Ser | Tyr | Thr | Phe | Val | Pro | Trp | Leu | Leu | Ser | Phe | Lys | Arg | Gly | Ser |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Ala | Leu | Glu | Glu | Lys | Glu | Asn | Lys | Ile | Leu | Val | Lys | Glu | Thr | Gly | Tyr |
| | 65 | | | | 70 | | | | | 75 | | | | | 80 |
| Phe | Phe | Ile | Tyr | Gly | Gln | Val | Leu | Tyr | Thr | Asp | Lys | Thr | Tyr | Ala | Met |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Gly | His | Leu | Ile | Gln | Arg | Lys | Lys | Val | His | Val | Phe | Gly | Asp | Glu | Leu |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Ser | Leu | Val | Thr | Leu | Phe | Arg | Cys | Ile | Gln | Asn | Met | Pro | Glu | Thr | Leu |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Pro | Asn | Asn | Ser | Cys | Tyr | Ser | Ala | Gly | Ile | Ala | Lys | Leu | Glu | Glu | Gly |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Asp | Glu | Leu | Gln | Leu | Ala | Ile | Pro | Arg | Glu | Asn | Ala | Gln | Ile | Ser | Leu |
| | 145 | | | | 150 | | | | | 155 | | | | | 160 |
| Asp | Gly | Asp | Val | Thr | Phe | Phe | Gly | Ala | Leu | Lys | Leu | Leu | Asp | Ala | His |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Lys | Ser | Glu | Val | Ala | His | Arg | Phe | Lys | Asp | Leu | Gly | Glu | Glu | Asn | Phe |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Lys | Ala | Leu | Val | Leu | Ile | Ala | Phe | Ala | Gln | Tyr | Leu | Gln | Gln | Cys | Pro |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Phe | Glu | Asp | His | Val | Lys | Leu | Val | Asn | Glu | Val | Thr | Glu | Phe | Ala | Lys |
| | 210 | | | | | 215 | | | | | | 220 | | | |
| Thr | Cys | Val | Ala | Asp | Glu | Ser | Ala | Glu | Asn | Cys | Asp | Lys | Ser | Leu | His |
| | 225 | | | | 230 | | | | | 235 | | | | | 240 |
| Thr | Leu | Phe | Gly | Asp | Lys | Leu | Cys | Thr | Val | Ala | Thr | Leu | Arg | Glu | Thr |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Tyr | Gly | Glu | Met | Ala | Asp | Cys | Cys | Ala | Lys | Gln | Glu | Pro | Glu | Arg | Asn |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Glu | Cys | Phe | Leu | Gln | His | Lys | Asp | Asp | Asn | Pro | Asn | Leu | Pro | Arg | Leu |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Val | Arg | Pro | Glu | Val | Asp | Val | Met | Cys | Thr | Ala | Phe | His | Asp | Asn | Glu |
| | 290 | | | | | 295 | | | | | 300 | | | | |

Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro
 305 310 315 320
 Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala
 325 330 335
 Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu
 340 345 350
 Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys
 355 360 365
 Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe
 370 375 380
 Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu
 385 390 395 400
 Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr
 405 410 415
 Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp
 420 425 430
 Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu
 435 440 445
 Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala
 450 455 460
 Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala
 465 470 475 480
 Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys
 485 490 495
 Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro
 500 505 510
 Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr
 515 520 525
 Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala
 530 535 540
 Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu
 545 550 555 560
 Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe
 565 570 575
 Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser
 580 585 590
 Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser
 595 600 605
 Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp
 610 615 620
 Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr
 625 630 635 640

Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn
 645 650 655
 Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro
 660 665 670
 Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr
 675 680 685
 Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu
 690 695 700
 Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val
 705 710 715 720
 Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp
 725 730 735
 Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser
 740 745 750
 Gln Ala Ala Leu Gly Leu
 755

<210> 330
 <211> 698
 <212> PRT
 <213> Homo sapiens

<400> 330
 Met Lys Val Ser Val Ala Ala Leu Ser Cys Leu Met Leu Val Thr Ala
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 Leu Gly Ser Gln Ala Met Gln Val Gly Thr Asn Lys Glu Leu Ala Leu
 20 25 30
 Ser Cys Leu Met Leu Val Thr Ala Leu Gly Ser Gln Ala Met Gln Val
 35 40 45
 Gly Thr Asn Lys Glu Leu Cys Cys Leu Val Tyr Thr Ser Trp Gln Ile
 50 55 60
 Pro Gln Lys Phe Ile Val Asp Tyr Ser Glu Thr Ser Pro Gln Cys Pro
 65 70 75 80
 Lys Pro Gly Val Ile Leu Leu Thr Lys Arg Gly Arg Gln Ile Cys Ala
 85 90 95
 Asp Pro Asn Lys Lys Trp Val Gln Lys Tyr Ile Ser Asp Leu Lys Leu
 100 105 110
 Asn Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly
 115 120 125
 Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu
 130 135 140
 Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr
 145 150 155 160

Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp
 165 170 175
 Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr
 180 185 190
 Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu
 195 200 205
 Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn
 210 215 220
 Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe
 225 230 235 240
 His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala
 245 250 255
 Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys
 260 265 270
 Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala
 275 280 285
 Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala
 290 295 300
 Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly
 305 310 315 320
 Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe
 325 330 335
 Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr
 340 345 350
 Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp
 355 360 365
 Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile
 370 375 380
 Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser
 385 390 395 400
 His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro
 405 410 415
 Ser Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr
 420 425 430
 Ala Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala
 435 440 445
 Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys
 450 455 460
 Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His
 465 470 475 480
 Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu
 485 490 495

Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly
 500 505 510
 Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val
 515 520 525
 Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly
 530 535 540
 Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro
 545 550 555 560
 Cys Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu
 565 570 575
 His Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu
 580 585 590
 Ser Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu
 595 600 605
 Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala
 610 615 620
 Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr
 625 630 635 640
 Ala Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln
 645 650 655
 Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys
 660 665 670
 Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu
 675 680 685
 Val Ala Ala Ser Gln Ala Ala Leu Gly Leu
 690 695

<210> 331
 <211> 771
 <212> PRT
 <213> Homo sapiens

<400> 331
 Met Lys Val Ser Val Ala Ala Leu Ser Cys Leu Met Leu Val Thr Ala
 1 5 10 15
 Leu Gly Ser Gln Ala Ala Pro Pro Arg Leu Ile Cys Asp Ser Arg Val
 20 25 30
 Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu Ala Glu Asn Ile Thr Thr
 35 40 45
 Gly Cys Ala Glu His Cys Ser Leu Asn Glu Asn Ile Thr Val Pro Asp
 50 55 60
 Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg Met Glu Val Gly Gln Gln
 65 70 75 80
 Ala Val Glu Val Trp Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu

| 85 | | | | | 90 | | | | | 95 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Gly | Gln | Ala | Leu | Leu | Val | Asn | Ser | Ser | Gln | Pro | Trp | Glu | Pro | Leu |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Gln | Leu | His | Val | Asp | Lys | Ala | Val | Ser | Gly | Leu | Arg | Ser | Leu | Thr | Thr |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Leu | Leu | Arg | Ala | Leu | Arg | Ala | Gln | Lys | Glu | Ala | Ile | Ser | Pro | Pro | Asp |
| | | 130 | | | | | 135 | | | | | 140 | | | |
| Ala | Ala | Ser | Ala | Ala | Pro | Leu | Arg | Thr | Ile | Thr | Ala | Asp | Thr | Phe | Arg |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Lys | Leu | Phe | Arg | Val | Tyr | Ser | Asn | Phe | Leu | Arg | Gly | Lys | Leu | Lys | Leu |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Tyr | Thr | Gly | Glu | Ala | Cys | Arg | Thr | Gly | Asp | Asp | Ala | His | Lys | Ser | Glu |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Val | Ala | His | Arg | Phe | Lys | Asp | Leu | Gly | Glu | Glu | Asn | Phe | Lys | Ala | Leu |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Val | Leu | Ile | Ala | Phe | Ala | Gln | Tyr | Leu | Gln | Gln | Cys | Pro | Phe | Glu | Asp |
| | | 210 | | | | | 215 | | | | | 220 | | | |
| His | Val | Lys | Leu | Val | Asn | Glu | Val | Thr | Glu | Phe | Ala | Lys | Thr | Cys | Val |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Ala | Asp | Glu | Ser | Ala | Glu | Asn | Cys | Asp | Lys | Ser | Leu | His | Thr | Leu | Phe |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Gly | Asp | Lys | Leu | Cys | Thr | Val | Ala | Thr | Leu | Arg | Glu | Thr | Tyr | Gly | Glu |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Met | Ala | Asp | Cys | Cys | Ala | Lys | Gln | Glu | Pro | Glu | Arg | Asn | Glu | Cys | Phe |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Leu | Gln | His | Lys | Asp | Asp | Asn | Pro | Asn | Leu | Pro | Arg | Leu | Val | Arg | Pro |
| | | 290 | | | | | 295 | | | | | 300 | | | |
| Glu | Val | Asp | Val | Met | Cys | Thr | Ala | Phe | His | Asp | Asn | Glu | Glu | Thr | Phe |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Leu | Lys | Lys | Tyr | Leu | Tyr | Glu | Ile | Ala | Arg | Arg | His | Pro | Tyr | Phe | Tyr |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Ala | Pro | Glu | Leu | Leu | Phe | Phe | Ala | Lys | Arg | Tyr | Lys | Ala | Ala | Phe | Thr |
| | | | | 340 | | | | 345 | | | | | 350 | | |
| Glu | Cys | Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala | Cys | Leu | Leu | Pro | Lys | Leu |
| | | 355 | | | | | 360 | | | | | 365 | | | |
| Asp | Glu | Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser | Ser | Ala | Lys | Gln | Arg | Leu |
| | | 370 | | | | 375 | | | | | 380 | | | | |
| Lys | Cys | Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe | Lys | Ala | Trp |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Ala | Val | Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu | Phe | Ala | Glu |
| | | | | 405 | | | | | 410 | | | | | 415 | |
| Val | Ser | Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | Val | His | Thr | Glu | Cys | Cys |

| 420 | | | | | 425 | | | | | 430 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Gly | Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | Arg | Ala | Asp | Leu | Ala | Lys |
| | | 435 | | | | | 440 | | | | | 445 | | | |
| Tyr | Ile | Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu | Lys | Glu | Cys |
| | 450 | | | | | 455 | | | | | 460 | | | | |
| Cys | Glu | Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | Cys | Ile | Ala | Glu | Val | Glu |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 |
| Asn | Asp | Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | Leu | Ala | Ala | Asp | Phe | Val |
| | | | | 485 | | | | | 490 | | | | | 495 | |
| Glu | Ser | Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys | Asp | Val | Phe |
| | | | 500 | | | | | 505 | | | | | 510 | | |
| Leu | Gly | Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | Arg | His | Pro | Asp | Tyr | Ser |
| | | 515 | | | | | 520 | | | | | 525 | | | |
| Val | Val | Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | Tyr | Glu | Thr | Thr | Leu | Glu |
| | 530 | | | | | 535 | | | | | 540 | | | | |
| Lys | Cys | Cys | Ala | Ala | Ala | Asp | Pro | His | Glu | Cys | Tyr | Ala | Lys | Val | Phe |
| 545 | | | | | 550 | | | | | 555 | | | | | 560 |
| Asp | Glu | Phe | Lys | Pro | Leu | Val | Glu | Glu | Pro | Gln | Asn | Leu | Ile | Lys | Gln |
| | | | | 565 | | | | | 570 | | | | | 575 | |
| Asn | Cys | Glu | Leu | Phe | Glu | Gln | Leu | Gly | Glu | Tyr | Lys | Phe | Gln | Asn | Ala |
| | | | 580 | | | | | 585 | | | | | 590 | | |
| Leu | Leu | Val | Arg | Tyr | Thr | Lys | Lys | Val | Pro | Gln | Val | Ser | Thr | Pro | Thr |
| | | 595 | | | | | 600 | | | | | 605 | | | |
| Leu | Val | Glu | Val | Ser | Arg | Asn | Leu | Gly | Lys | Val | Gly | Ser | Lys | Cys | Cys |
| | 610 | | | | | 615 | | | | | 620 | | | | |
| Lys | His | Pro | Glu | Ala | Lys | Arg | Met | Pro | Cys | Ala | Glu | Asp | Tyr | Leu | Ser |
| 625 | | | | | 630 | | | | | 635 | | | | | 640 |
| Val | Val | Leu | Asn | Gln | Leu | Cys | Val | Leu | His | Glu | Lys | Thr | Pro | Val | Ser |
| | | | 645 | | | | | | 650 | | | | | 655 | |
| Asp | Arg | Val | Thr | Lys | Cys | Cys | Thr | Glu | Ser | Leu | Val | Asn | Arg | Arg | Pro |
| | | | 660 | | | | | 665 | | | | | 670 | | |
| Cys | Phe | Ser | Ala | Leu | Glu | Val | Asp | Glu | Thr | Tyr | Val | Pro | Lys | Glu | Phe |
| | | 675 | | | | | 680 | | | | | 685 | | | |
| Asn | Ala | Glu | Thr | Phe | Thr | Phe | His | Ala | Asp | Ile | Cys | Thr | Leu | Ser | Glu |
| | 690 | | | | | 695 | | | | | 700 | | | | |
| Lys | Glu | Arg | Gln | Ile | Lys | Lys | Gln | Thr | Ala | Leu | Val | Glu | Leu | Val | Lys |
| 705 | | | | | 710 | | | | | 715 | | | | | 720 |
| His | Lys | Pro | Lys | Ala | Thr | Lys | Glu | Gln | Leu | Lys | Ala | Val | Met | Asp | Asp |
| | | | | 725 | | | | | 730 | | | | | 735 | |
| Phe | Ala | Ala | Phe | Val | Glu | Lys | Cys | Cys | Lys | Ala | Asp | Asp | Lys | Glu | Thr |
| | | | 740 | | | | | 745 | | | | | 750 | | |
| Cys | Phe | Ala | Glu | Glu | Gly | Lys | Lys | Leu | Val | Ala | Ala | Ser | Gln | Ala | Ala |

755 760 765
 Leu Gly Leu
 770

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 <212> PRT
 <213> Homo sapiens

 <400> 332
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 Lys Thr Asp Val Leu Arg Leu Val Leu Tyr Leu Thr Phe Leu Gly Ala
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 Pro Cys Tyr Ala Pro Ala Leu Pro Ser Cys Lys Glu Asp Glu Tyr Pro
 35 40 45
 Val Gly Ser Glu Cys Cys Pro Lys Cys Ser Pro Gly Tyr Arg Val Lys
 50 55 60
 Glu Ala Cys Gly Glu Leu Thr Gly Thr Val Cys Glu Pro Cys Pro Pro
 65 70 75 80
 Gly Thr Tyr Ile Ala His Leu Asn Gly Leu Ser Lys Cys Leu Gln Cys
 85 90 95
 Gln Met Cys Asp Pro Ala Met Gly Leu Arg Ala Ser Arg Asn Cys Ser
 100 105 110
 Arg Thr Glu Asn Ala Val Cys Gly Cys Ser Pro Gly His Phe Cys Ile
 115 120 125
 Val Gln Asp Gly Asp His Cys Ala Ala Cys Arg Ala Tyr Ala Thr Ser
 130 135 140
 Ser Pro Gly Gln Arg Val Gln Lys Gly Gly Thr Glu Ser Gln Asp Thr
 145 150 155 160
 Leu Cys Gln Asn Cys Pro Pro Gly Thr Phe Ser Pro Asn Gly Thr Leu
 165 170 175
 Glu Glu Cys Gln His Gln Thr Lys Cys Ser Trp Leu Val Thr Lys Ala
 180 185 190
 Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu
 195 200 205
 Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln
 210 215 220
 Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu
 225 230 235 240
 Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys
 245 250 255
 Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu
 260 265 270

Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro
 275 280 285
 Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu
 290 295 300
 Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His
 305 310 315 320
 Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg
 325 330 335
 Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg
 340 345 350
 Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala
 355 360 365
 Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser
 370 375 380
 Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu
 385 390 395 400
 Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro
 405 410 415
 Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys
 420 425 430
 Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp
 435 440 445
 Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser
 450 455 460
 Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His
 465 470 475 480
 Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser
 485 490 495
 Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala
 500 505 510
 Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg
 515 520 525
 Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr
 530 535 540
 Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu
 545 550 555 560
 Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro
 565 570 575
 Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu
 580 585 590
 Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro
 595 600 605

Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys
 610 615 620
 Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys
 625 630 635 640
 Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His
 645 650 655
 Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser
 660 665 670
 Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr
 675 680 685
 Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp
 690 695 700
 Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala
 705 710 715 720
 Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu
 725 730 735
 Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys
 740 745 750
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 Ala Ala Ser Gln Ala Ala Leu Gly Leu
 770 775

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 Asp Ser Val Cys Cys Arg Asp Tyr Val Arg Tyr Arg Leu Pro Leu Arg
 35 40 45
 Val Val Lys His Phe Tyr Trp Thr Ser Asp Ser Cys Pro Arg Pro Gly
 50 55 60
 Val Val Leu Leu Thr Phe Arg Asp Lys Glu Ile Cys Ala Asp Pro Arg
 65 70 75 80
 Val Pro Trp Val Lys Met Ile Leu Asn Lys Leu Ser Gln Asp Ala His
 85 90 95
 Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe
 100 105 110

Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro
 115 120 125
 Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys
 130 135 140
 Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His
 145 150 155 160
 Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr
 165 170 175
 Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn
 180 185 190
 Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu
 195 200 205
 Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu
 210 215 220
 Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro
 225 230 235 240
 Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala
 245 250 255
 Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu
 260 265 270
 Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys
 275 280 285
 Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe
 290 295 300
 Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu
 305 310 315 320
 Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr
 325 330 335
 Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp
 340 345 350
 Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu
 355 360 365
 Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala
 370 375 380
 Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala
 385 390 395 400
 Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys
 405 410 415
 Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro
 420 425 430
 Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr
 435 440 445

Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala
 450 455 460
 Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu
 465 470 475 480
 Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe
 485 490 495
 Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser
 500 505 510
 Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser
 515 520 525
 Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp
 530 535 540
 Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr
 545 550 555 560
 Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn
 565 570 575
 Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro
 580 585 590
 Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr
 595 600 605
 Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu
 610 615 620
 Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val
 625 630 635 640
 Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp
 645 650 655
 Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser
 660 665 670
 Gln Ala Ala Leu Gly Leu
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 <212> PRT
 <213> Homo sapiens

<400> 334
 Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
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 Tyr Ser Arg Gly Val Phe Arg Arg Asp Ala His Lys Ser Glu Val Ala
 20 25 30
 His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
 35 40 45
 Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val

| 50 | | | | | 55 | | | | | 60 | | | | | |
|--------|-----|-----|-----|--------|--------|-----|-----|-----|--------|--------|-----|-----|-----|--------|--------|
| Lys 65 | Leu | Val | Asn | Glu | Val 70 | Thr | Glu | Phe | Ala | Lys 75 | Thr | Cys | Val | Ala | Asp 80 |
| Glu | Ser | Ala | Glu | Asn 85 | Cys | Asp | Lys | Ser | Leu 90 | His | Thr | Leu | Phe | Gly 95 | Asp |
| Lys | Leu | Cys | Thr | Val | Ala | Thr | Leu | Arg | Glu | Thr | Tyr | Gly | Glu | Met | Ala |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Asp | Cys | Cys | Ala | Lys | Gln | Glu | Pro | Gly | Arg | Asn | Glu | Cys | Phe | Leu | Gln |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| His | Lys | Asp | Asp | Asn | Pro | Asn | Leu | Pro | Arg | Leu | Val | Arg | Pro | Glu | Val |
| | 130 | | | | | | 135 | | | | 140 | | | | |
| Asp | Val | Met | Cys | Thr | Ala | Phe | His | Asp | Asn | Glu | Glu | Thr | Phe | Leu | Lys |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Lys | Tyr | Leu | Tyr | Glu | Ile | Ala | Arg | Arg | His | Pro | Tyr | Phe | Tyr | Ala | Pro |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Glu | Leu | Leu | Phe | Phe | Ala | Lys | Arg | Tyr | Lys | Ala | Ala | Phe | Thr | Glu | Cys |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala | Cys | Leu | Leu | Pro | Lys | Leu | Asp | Glu |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser | Ser | Ala | Lys | Gln | Arg | Leu | Lys | Cys |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe | Lys | Ala | Trp | Ala | Val |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu | Phe | Ala | Glu | Val | Ser |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | Val | His | Thr | Glu | Cys | Cys | His | Gly |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | Arg | Ala | Asp | Leu | Ala | Lys | Tyr | Ile |
| | 275 | | | | | | 280 | | | | | 285 | | | |
| Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu | Lys | Glu | Cys | Cys | Glu |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | Cys | Ile | Ala | Glu | Val | Glu | Asn | Asp |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | Leu | Ala | Ala | Asp | Phe | Val | Glu | Ser |
| | | | 325 | | | | | | 330 | | | | | 335 | |
| Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys | Asp | Val | Phe | Leu | Gly |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | Arg | His | Pro | Asp | Tyr | Ser | Val | Val |
| | 355 | | | | | | 360 | | | | | 365 | | | |
| Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | Tyr | Glu | Thr | Thr | Leu | Glu | Lys | Cys |
| | 370 | | | | | 375 | | | | | 380 | | | | |
| Cys | Ala | Ala | Ala | Asp | Pro | His | Glu | Cys | Tyr | Ala | Lys | Val | Phe | Asp | Glu |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 385 | | 390 | | 395 | | 400 | | | | | | | | | |
| Phe | Lys | Pro | Leu | Val | Glu | Glu | Pro | Gln | Asn | Leu | Ile | Lys | Gln | Asn | Cys |
| | | | | 405 | | | | | 410 | | | | | 415 | |
| Glu | Leu | Phe | Glu | Gln | Leu | Gly | Glu | Tyr | Lys | Phe | Gln | Asn | Ala | Leu | Leu |
| | | | 420 | | | | | 425 | | | | | 430 | | |
| Val | Arg | Tyr | Thr | Lys | Lys | Val | Pro | Glu | Val | Ser | Thr | Pro | Thr | Leu | Val |
| | | 435 | | | | | 440 | | | | | 445 | | | |
| Glu | Val | Ser | Arg | Asn | Leu | Gly | Lys | Val | Gly | Ser | Lys | Cys | Cys | Lys | His |
| | 450 | | | | | 455 | | | | | 460 | | | | |
| Pro | Glu | Ala | Lys | Arg | Met | Pro | Cys | Ala | Glu | Asp | Tyr | Leu | Ser | Val | Val |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 |
| Leu | Asn | Gln | Leu | Cys | Val | Leu | His | Glu | Lys | Thr | Pro | Val | Ser | Asp | Arg |
| | | | | 485 | | | | | 490 | | | | | 495 | |
| Val | Thr | Lys | Cys | Cys | Thr | Glu | Ser | Leu | Val | Asn | Arg | Arg | Pro | Cys | Phe |
| | | | 500 | | | | | 505 | | | | | 510 | | |
| Ser | Ala | Leu | Glu | Val | Asp | Glu | Thr | Tyr | Val | Pro | Lys | Glu | Phe | Asn | Ala |
| | | 515 | | | | | 520 | | | | | 525 | | | |
| Glu | Thr | Phe | Thr | Phe | His | Ala | Asp | Ile | Cys | Thr | Leu | Ser | Glu | Lys | Glu |
| | 530 | | | | | 535 | | | | | 540 | | | | |
| Arg | Gln | Ile | Lys | Lys | Gln | Thr | Ala | Leu | Val | Glu | Leu | Val | Lys | His | Lys |
| 545 | | | | | 550 | | | | | 555 | | | | | 560 |
| Pro | Lys | Ala | Thr | Lys | Glu | Gln | Leu | Lys | Ala | Val | Met | Asp | Asp | Phe | Ala |
| | | | | 565 | | | | | 570 | | | | | 575 | |
| Ala | Phe | Val | Glu | Lys | Cys | Cys | Lys | Ala | Asp | Asp | Lys | Glu | Thr | Cys | Phe |
| | | | 580 | | | | | 585 | | | | 590 | | | |
| Ala | Glu | Glu | Gly | Lys | Lys | Leu | Val | Ala | Ala | Ser | Gln | Ala | Ala | Leu | Gly |
| | | 595 | | | | | 600 | | | | | 605 | | | |
| Leu | Met | Cys | Cys | Thr | Lys | Ser | Leu | Leu | Leu | Ala | Ala | Leu | Met | Ser | Val |
| | 610 | | | | | 615 | | | | | 620 | | | | |
| Leu | Leu | Leu | His | Leu | Cys | Gly | Glu | Ser | Glu | Ala | Ala | Ser | Asn | Phe | Asp |
| 625 | | | | | 630 | | | | | 635 | | | | | 640 |
| Cys | Cys | Leu | Gly | Tyr | Thr | Asp | Arg | Ile | Leu | His | Pro | Lys | Phe | Ile | Val |
| | | | 645 | | | | | 650 | | | | | 655 | | |
| Gly | Phe | Thr | Arg | Gln | Leu | Ala | Asn | Glu | Gly | Cys | Asp | Ile | Asn | Ala | Ile |
| | | | 660 | | | | | 665 | | | | | 670 | | |
| Ile | Phe | His | Thr | Lys | Lys | Lys | Leu | Ser | Val | Cys | Ala | Asn | Pro | Lys | Gln |
| | | 675 | | | | | 680 | | | | | 685 | | | |
| Thr | Trp | Val | Lys | Tyr | Ile | Val | Arg | Leu | Leu | Ser | Lys | Lys | Val | Lys | Asn |
| | 690 | | | | | 695 | | | | | 700 | | | | |
| Met | | | | | | | | | | | | | | | |
| 705 | | | | | | | | | | | | | | | |

<210> 335
 <211> 752
 <212> PRT
 <213> Homo sapiens

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Phe Tyr Val Gln Ala Val Pro Ile Gln Lys Val Gln Asp Asp Thr Lys
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Thr Leu Ile Lys Thr Ile Val Thr Arg Ile Asn Asp Ile Ser His Thr
  35          40          45

Gln Ser Val Ser Ser Lys Gln Lys Val Thr Gly Leu Asp Phe Ile Pro
  50          55          60

Gly Leu His Pro Ile Leu Thr Leu Ser Lys Met Asp Gln Thr Leu Ala
  65          70          75          80

Val Tyr Gln Gln Ile Leu Thr Ser Met Pro Ser Arg Asn Val Ile Gln
          85          90          95

Ile Ser Asn Asp Leu Glu Asn Leu Arg Asp Leu Leu His Val Leu Ala
          100          105          110

Phe Ser Lys Ser Cys His Leu Pro Trp Ala Ser Gly Leu Glu Thr Leu
          115          120          125

Asp Ser Leu Gly Gly Val Leu Glu Ala Ser Gly Tyr Ser Thr Glu Val
          130          135          140

Val Ala Leu Ser Arg Leu Gln Gly Ser Leu Gln Asp Met Leu Trp Gln
          145          150          155          160

Leu Asp Leu Ser Pro Gly Cys Asp Ala His Lys Ser Glu Val Ala His
          165          170          175

Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile
          180          185          190

Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys
          195          200          205

Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu
          210          215          220

Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp Lys
          225          230          235          240

Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp
          245          250          255

Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His
          260          265          270

Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp
          275          280          285

Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys
          290          295          300

```

Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu
305 310 315 320
Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys
325 330 335
Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu
340 345 350
Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala
355 360 365
Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala
370 375 380
Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys
385 390 395 400
Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly Asp
405 410 415
Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys
420 425 430
Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys
435 440 445
Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu
450 455 460
Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser Lys
465 470 475 480
Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly Met
485 490 495
Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu
500 505 510
Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys
515 520 525
Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe
530 535 540
Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu
545 550 555 560
Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val
565 570 575
Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu
580 585 590
Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro
595 600 605
Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val Leu
610 615 620
Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg Val
625 630 635 640

Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser
 645 650 655
 Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu
 660 665 670
 Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg
 675 680 685
 Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys Pro
 690 695 700
 Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala
 705 710 715 720
 Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala
 725 730 735
 Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly Leu
 740 745 750

<210> 336
 <211> 762
 <212> PRT
 <213> Homo sapiens

<400> 336
 Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1 5 10 15
 Tyr Ser Arg Gly Val Phe Arg Arg Asp Ala His Lys Ser Glu Val Ala
 20 25 30
 His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
 35 40 45
 Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
 50 55 60
 Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
 65 70 75 80
 Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
 85 90 95
 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
 100 105 110
 Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln
 115 120 125
 His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
 130 135 140
 Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys
 145 150 155 160
 Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro
 165 170 175

Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys
 180 185 190
 Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu
 195 200 205
 Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys
 210 215 220
 Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val
 225 230 235 240
 Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser
 245 250 255
 Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly
 260 265 270
 Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile
 275 280 285
 Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu
 290 295 300
 Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp
 305 310 315 320
 Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser
 325 330 335
 Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly
 340 345 350
 Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val
 355 360 365
 Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys
 370 375 380
 Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu
 385 390 395 400
 Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys
 405 410 415
 Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu
 420 425 430
 Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val
 435 440 445
 Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His
 450 455 460
 Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val
 465 470 475 480
 Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg
 485 490 495
 Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe
 500 505 510

Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala
 515 520 525
 Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu
 530 535 540
 Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys
 545 550 555 560
 Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala
 565 570 575
 Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe
 580 585 590
 Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
 595 600 605
 Leu Met Arg Pro Ser Gly Arg Lys Ser Ser Lys Met Gln Ala Phe Arg
 610 615 620
 Ile Trp Asp Val Asn Gln Lys Thr Phe Tyr Leu Arg Asn Asn Gln Leu
 625 630 635 640
 Val Ala Gly Tyr Leu Gln Gly Pro Asn Val Asn Leu Glu Glu Lys Ile
 645 650 655
 Asp Val Val Pro Ile Glu Pro His Ala Leu Phe Leu Gly Ile His Gly
 660 665 670
 Gly Lys Met Cys Leu Ser Cys Val Lys Ser Gly Asp Glu Thr Arg Leu
 675 680 685
 Gln Leu Glu Ala Val Asn Ile Thr Asp Leu Ser Glu Asn Arg Lys Gln
 690 695 700
 Asp Lys Arg Phe Ala Phe Ile Arg Ser Asp Ser Gly Pro Thr Thr Ser
 705 710 715 720
 Phe Glu Ser Ala Ala Cys Pro Gly Trp Phe Leu Cys Thr Ala Met Glu
 725 730 735
 Ala Asp Gln Pro Val Ser Leu Thr Asn Met Pro Asp Glu Gly Val Met
 740 745 750
 Val Thr Lys Phe Tyr Phe Gln Glu Asp Glu
 755 760

<210> 337
 <211> 759
 <212> PRT
 <213> Homo sapiens

<400> 337
 Met Lys Val Ser Val Ala Ala Leu Ser Cys Leu Met Leu Val Thr Ala
 1 5 10 15
 Leu Gly Ser Gln Ala Met Arg Pro Ser Gly Arg Lys Ser Ser Lys Met
 20 25 30
 Gln Ala Phe Arg Ile Trp Asp Val Asn Gln Lys Thr Phe Tyr Leu Arg
 35 40 45

Asn Asn Gln Leu Val Ala Gly Tyr Leu Gln Gly Pro Asn Val Asn Leu
 50 55 60
 Glu Glu Lys Ile Asp Val Val Pro Ile Glu Pro His Ala Leu Phe Leu
 65 70 75 80
 Gly Ile His Gly Gly Lys Met Cys Leu Ser Cys Val Lys Ser Gly Asp
 85 90 95
 Glu Thr Arg Leu Gln Leu Glu Ala Val Asn Ile Thr Asp Leu Ser Glu
 100 105 110
 Asn Arg Lys Gln Asp Lys Arg Phe Ala Phe Ile Arg Ser Asp Ser Gly
 115 120 125
 Pro Thr Thr Ser Phe Glu Ser Ala Ala Cys Pro Gly Trp Phe Leu Cys
 130 135 140
 Thr Ala Met Glu Ala Asp Gln Pro Val Ser Leu Thr Asn Met Pro Asp
 145 150 155 160
 Glu Gly Val Met Val Thr Lys Phe Tyr Phe Gln Glu Asp Glu Asp Ala
 165 170 175
 His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn
 180 185 190
 Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys
 195 200 205
 Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala
 210 215 220
 Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu
 225 230 235 240
 His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu
 245 250 255
 Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg
 260 265 270
 Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg
 275 280 285
 Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn
 290 295 300
 Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His
 305 310 315 320
 Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys
 325 330 335
 Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu
 340 345 350
 Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala
 355 360 365
 Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala
 370 375 380

Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala
385 390 395 400
Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His
405 410 415
Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala
420 425 430
Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys
435 440 445
Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile
450 455 460
Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala
465 470 475 480
Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala
485 490 495
Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His
500 505 510
Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu
515 520 525
Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr
530 535 540
Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn
545 550 555 560
Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys
565 570 575
Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val
580 585 590
Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly
595 600 605
Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu
610 615 620
Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys
625 630 635 640
Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val
645 650 655
Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val
660 665 670
Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys
675 680 685
Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val
690 695 700
Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala
705 710 715 720

Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp
 725 730 735
 Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala
 740 745 750
 Ser Gln Ala Ala Leu Gly Leu
 755
 <210> 338
 <211> 762
 <212> PRT
 <213> Homo sapiens
 <400> 338
 Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1 5 10 15
 Tyr Ser Arg Gly Val Phe Arg Arg Asp Ala His Lys Ser Glu Val Ala
 20 25 30
 His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
 35 40 45
 Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
 50 55 60
 Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
 65 70 75 80
 Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
 85 90 95
 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
 100 105 110
 Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln
 115 120 125
 His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
 130 135 140
 Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys
 145 150 155 160
 Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro
 165 170 175
 Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys
 180 185 190
 Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu
 195 200 205
 Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys
 210 215 220
 Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val
 225 230 235 240
 Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser
 245 250 255

Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly
 260 265 270
 Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile
 275 280 285
 Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu
 290 295 300
 Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp
 305 310 315 320
 Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser
 325 330 335
 Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly
 340 345 350
 Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val
 355 360 365
 Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys
 370 375 380
 Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu
 385 390 395 400
 Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys
 405 410 415
 Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu
 420 425 430
 Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val
 435 440 445
 Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His
 450 455 460
 Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val
 465 470 475 480
 Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg
 485 490 495
 Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe
 500 505 510
 Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala
 515 520 525
 Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu
 530 535 540
 Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys
 545 550 555 560
 Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala
 565 570 575
 Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe
 580 585 590

Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
 595 600 605
 Leu Met Arg Pro Ser Gly Arg Lys Ser Ser Lys Met Gln Ala Phe Arg
 610 615 620
 Ile Trp Asp Val Asn Gln Lys Thr Phe Tyr Leu Arg Asn Asn Gln Leu
 625 630 635 640
 Val Ala Gly Tyr Leu Gln Gly Pro Asn Val Asn Leu Glu Glu Lys Ile
 645 650 655
 Asp Val Val Pro Ile Glu Pro His Ala Leu Phe Leu Gly Ile His Gly
 660 665 670
 Gly Lys Met Cys Leu Ser Cys Val Lys Ser Gly Asp Glu Thr Arg Leu
 675 680 685
 Gln Leu Glu Ala Val Asn Ile Thr Asp Leu Ser Glu Asn Arg Lys Gln
 690 695 700
 Asp Lys Arg Phe Ala Phe Ile Arg Ser Asp Ser Gly Pro Thr Thr Ser
 705 710 715 720
 Phe Glu Ser Ala Ala Cys Pro Gly Trp Phe Leu Cys Thr Ala Met Glu
 725 730 735
 Ala Asp Gln Pro Val Ser Leu Thr Asn Met Pro Asp Glu Gly Val Met
 740 745 750
 Val Thr Lys Phe Tyr Phe Gln Glu Asp Glu
 755 760

<210> 339
 <211> 755
 <212> PRT
 <213> Homo sapiens

<400> 339
 Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1 5 10 15
 Tyr Ser Arg Gly Val Phe Arg Arg Asp Ala His Lys Ser Glu Val Ala
 20 25 30
 His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
 35 40 45
 Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
 50 55 60
 Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
 65 70 75 80
 Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
 85 90 95
 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
 100 105 110

| | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Cys | Cys | Ala | Lys | Gln | Glu | Pro | Glu | Arg | Asn | Glu | Cys | Phe | Leu | Gln | 115 | 120 | 125 |
| His | Lys | Asp | Asp | Asn | Pro | Asn | Leu | Pro | Arg | Leu | Val | Arg | Pro | Glu | Val | 130 | 135 | 140 |
| Asp | Val | Met | Cys | Thr | Ala | Phe | His | Asp | Asn | Glu | Glu | Thr | Phe | Leu | Lys | 145 | 150 | 155 |
| Lys | Tyr | Leu | Tyr | Glu | Ile | Ala | Arg | Arg | His | Pro | Tyr | Phe | Tyr | Ala | Pro | 165 | 170 | 175 |
| Glu | Leu | Leu | Phe | Phe | Ala | Lys | Arg | Tyr | Lys | Ala | Ala | Phe | Thr | Glu | Cys | 180 | 185 | 190 |
| Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala | Cys | Leu | Leu | Pro | Lys | Leu | Asp | Glu | 195 | 200 | 205 |
| Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser | Ser | Ala | Lys | Gln | Arg | Leu | Lys | Cys | 210 | 215 | 220 |
| Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe | Lys | Ala | Trp | Ala | Val | 225 | 230 | 235 |
| Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu | Phe | Ala | Glu | Val | Ser | 245 | 250 | 255 |
| Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | Val | His | Thr | Glu | Cys | Cys | His | Gly | 260 | 265 | 270 |
| Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | Arg | Ala | Asp | Leu | Ala | Lys | Tyr | Ile | 275 | 280 | 285 |
| Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu | Lys | Glu | Cys | Cys | Glu | 290 | 295 | 300 |
| Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | Cys | Ile | Ala | Glu | Val | Glu | Asn | Asp | 305 | 310 | 315 |
| Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | Leu | Ala | Ala | Asp | Phe | Val | Glu | Ser | 325 | 330 | 335 |
| Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys | Asp | Val | Phe | Leu | Gly | 340 | 345 | 350 |
| Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | Arg | His | Pro | Asp | Tyr | Ser | Val | Val | 355 | 360 | 365 |
| Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | Tyr | Glu | Thr | Thr | Leu | Glu | Lys | Cys | 370 | 375 | 380 |
| Cys | Ala | Ala | Ala | Asp | Pro | His | Glu | Cys | Tyr | Ala | Lys | Val | Phe | Asp | Glu | 385 | 390 | 395 |
| Phe | Lys | Pro | Leu | Val | Glu | Glu | Pro | Gln | Asn | Leu | Ile | Lys | Gln | Asn | Cys | 405 | 410 | 415 |
| Glu | Leu | Phe | Glu | Gln | Leu | Gly | Glu | Tyr | Lys | Phe | Gln | Asn | Ala | Leu | Leu | 420 | 425 | 430 |
| Val | Arg | Tyr | Thr | Lys | Lys | Val | Pro | Gln | Val | Ser | Thr | Pro | Thr | Leu | Val | 435 | 440 | 445 |

Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His
 450 455 460
 Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val
 465 470 475 480
 Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg
 485 490 495
 Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe
 500 505 510
 Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala
 515 520 525
 Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu
 530 535 540
 Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys
 545 550 555 560
 Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala
 565 570 575
 Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe
 580 585 590
 Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
 595 600 605
 Leu Val Pro Ile Gln Lys Val Gln Asp Asp Thr Lys Thr Leu Ile Lys
 610 615 620
 Thr Ile Val Thr Arg Ile Asn Asp Ile Ser His Thr Gln Ser Val Ser
 625 630 635 640
 Ser Lys Gln Lys Val Thr Gly Leu Asp Phe Ile Pro Gly Leu His Pro
 645 650 655
 Ile Leu Thr Leu Ser Lys Met Asp Gln Thr Leu Ala Val Tyr Gln Gln
 660 665 670
 Ile Leu Thr Ser Met Pro Ser Arg Asn Val Ile Gln Ile Ser Asn Asp
 675 680 685
 Leu Glu Asn Leu Arg Asp Leu Leu His Val Leu Ala Phe Ser Lys Ser
 690 695 700
 Cys His Leu Pro Trp Ala Ser Gly Leu Glu Thr Leu Asp Ser Leu Gly
 705 710 715 720
 Gly Val Leu Glu Ala Ser Gly Tyr Ser Thr Glu Val Val Ala Leu Ser
 725 730 735
 Arg Leu Gln Gly Ser Leu Gln Asp Met Leu Trp Gln Leu Asp Leu Ser
 740 745 750
 Pro Gly Cys
 755

<210> 340
 <211> 762

<212> PRT

<213> Homo sapiens

<400> 340

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Lys | Trp | Val | Ser | Phe | Ile | Ser | Leu | Leu | Phe | Leu | Phe | Ser | Ser | Ala |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Tyr | Ser | Arg | Ser | Leu | Asp | Lys | Arg | Met | Arg | Pro | Ser | Gly | Arg | Lys | Ser |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Lys | Met | Gln | Ala | Phe | Arg | Ile | Trp | Asp | Val | Asn | Gln | Lys | Thr | Phe |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Tyr | Leu | Arg | Asn | Asn | Gln | Leu | Val | Ala | Gly | Tyr | Leu | Gln | Gly | Pro | Asn |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Val | Asn | Leu | Glu | Glu | Lys | Ile | Asp | Val | Val | Pro | Ile | Glu | Pro | His | Ala |
| | 65 | | | | | 70 | | | | 75 | | | | | 80 |
| Leu | Phe | Leu | Gly | Ile | His | Gly | Gly | Lys | Met | Cys | Leu | Ser | Cys | Val | Lys |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Ser | Gly | Asp | Glu | Thr | Arg | Leu | Gln | Leu | Glu | Ala | Val | Asn | Ile | Thr | Asp |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Leu | Ser | Glu | Asn | Arg | Lys | Gln | Asp | Lys | Arg | Phe | Ala | Phe | Ile | Arg | Ser |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Asp | Ser | Gly | Pro | Thr | Thr | Ser | Phe | Glu | Ser | Ala | Ala | Cys | Pro | Gly | Trp |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Phe | Leu | Cys | Thr | Ala | Met | Glu | Ala | Asp | Gln | Pro | Val | Ser | Leu | Thr | Asn |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Met | Pro | Asp | Glu | Gly | Val | Met | Val | Thr | Lys | Phe | Tyr | Phe | Gln | Glu | Asp |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Glu | Asp | Ala | His | Lys | Ser | Glu | Val | Ala | His | Arg | Phe | Lys | Asp | Leu | Gly |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Glu | Glu | Asn | Phe | Lys | Ala | Leu | Val | Leu | Ile | Ala | Phe | Ala | Gln | Tyr | Leu |
| | 195 | | | | | | 200 | | | | | 205 | | | |
| Gln | Gln | Cys | Pro | Phe | Glu | Asp | His | Val | Lys | Leu | Val | Asn | Glu | Val | Thr |
| | 210 | | | | | 215 | | | | | | 220 | | | |
| Glu | Phe | Ala | Lys | Thr | Cys | Val | Ala | Asp | Glu | Ser | Ala | Glu | Asn | Cys | Asp |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Lys | Ser | Leu | His | Thr | Leu | Phe | Gly | Asp | Lys | Leu | Cys | Thr | Val | Ala | Thr |
| | | | 245 | | | | | | 250 | | | | | 255 | |
| Leu | Arg | Glu | Thr | Tyr | Gly | Glu | Met | Ala | Asp | Cys | Cys | Ala | Lys | Gln | Glu |
| | | 260 | | | | | 265 | | | | | | 270 | | |
| Pro | Glu | Arg | Asn | Glu | Cys | Phe | Leu | Gln | His | Lys | Asp | Asp | Asn | Pro | Asn |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Leu | Pro | Arg | Leu | Val | Arg | Pro | Glu | Val | Asp | Val | Met | Cys | Thr | Ala | Phe |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| His | Asp | Asn | Glu | Glu | Thr | Phe | Leu | Lys | Lys | Tyr | Leu | Tyr | Glu | Ile | Ala |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |

Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys
 325 330 335
 Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala
 340 345 350
 Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala
 355 360 365
 Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly
 370 375 380
 Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe
 385 390 395 400
 Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr
 405 410 415
 Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp
 420 425 430
 Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile
 435 440 445
 Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser
 450 455 460
 His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro
 465 470 475 480
 Ser Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr
 485 490 495
 Ala Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala
 500 505 510
 Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys
 515 520 525
 Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His
 530 535 540
 Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu
 545 550 555 560
 Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly
 565 570 575
 Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val
 580 585 590
 Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly
 595 600 605
 Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro
 610 615 620
 Cys Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu
 625 630 635 640
 His Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu
 645 650 655

Ser Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu
 660 665 670
 Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala
 675 680 685
 Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr
 690 695 700
 Ala Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln
 705 710 715 720
 Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys
 725 730 735
 Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu
 740 745 750
 Val Ala Ala Ser Gln Ala Ala Leu Gly Leu
 755 760

<210> 341
 <211> 755
 <212> PRT
 <213> Homo sapiens

<400> 341
 Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1 5 10 15
 Tyr Ser Arg Ser Leu Asp Lys Arg Val Pro Ile Gln Lys Val Gln Asp
 20 25 30
 Asp Thr Lys Thr Leu Ile Lys Thr Ile Val Thr Arg Ile Asn Asp Ile
 35 40 45
 Ser His Thr Gln Ser Val Ser Ser Lys Gln Lys Val Thr Gly Leu Asp
 50 55 60
 Phe Ile Pro Gly Leu His Pro Ile Leu Thr Leu Ser Lys Met Asp Gln
 65 70 75 80
 Thr Leu Ala Val Tyr Gln Gln Ile Leu Thr Ser Met Pro Ser Arg Asn
 85 90 95
 Val Ile Gln Ile Ser Asn Asp Leu Glu Asn Leu Arg Asp Leu Leu His
 100 105 110
 Val Leu Ala Phe Ser Lys Ser Cys His Leu Pro Trp Ala Ser Gly Leu
 115 120 125
 Glu Thr Leu Asp Ser Leu Gly Gly Val Leu Glu Ala Ser Gly Tyr Ser
 130 135 140
 Thr Glu Val Val Ala Leu Ser Arg Leu Gln Gly Ser Leu Gln Asp Met
 145 150 155 160
 Leu Trp Gln Leu Asp Leu Ser Pro Gly Cys Asp Ala His Lys Ser Glu
 165 170 175

Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu
180 185 190
Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp
195 200 205
His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val
210 215 220
Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe
225 230 235 240
Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu
245 250 255
Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe
260 265 270
Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro
275 280 285
Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe
290 295 300
Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr
305 310 315 320
Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr
325 330 335
Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu
340 345 350
Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu
355 360 365
Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp
370 375 380
Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu
385 390 395 400
Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys
405 410 415
His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys
420 425 430
Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys
435 440 445
Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu
450 455 460
Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val
465 470 475 480
Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe
485 490 495
Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser
500 505 510

Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu
515 520
Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe
530 535 540
Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln
545 550 555 560
Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala
565 570 575
Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr
580 585 590
Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys
595 600 605
Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser
610 615 620
Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser
625 630 635 640
Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro
645 650 655
Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe
660 665 670
Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu
675 680 685
Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys
690 695 700
His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp
705 710 715 720
Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr
725 730 735
Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala
740 745 750
Leu Gly Leu
755

<210> 342
<211> 755
<212> PRT
<213> Homo sapiens

<400> 342
Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
1 5 10 15
Tyr Ser Arg Ser Leu Asp Lys Arg Asp Ala His Lys Ser Glu Val Ala
20 25 30
His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu

| 35 | | | | | 40 | | | | | 45 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Ala | Phe | Ala | Gln | Tyr | Leu | Gln | Gln | Cys | Pro | Phe | Glu | Asp | His | Val |
| 50 | | | | | | 55 | | | | | 60 | | | | |
| Lys | Leu | Val | Asn | Glu | Val | Thr | Glu | Phe | Ala | Lys | Thr | Cys | Val | Ala | Asp |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Glu | Ser | Ala | Glu | Asn | Cys | Asp | Lys | Ser | Leu | His | Thr | Leu | Phe | Gly | Asp |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Lys | Leu | Cys | Thr | Val | Ala | Thr | Leu | Arg | Glu | Thr | Tyr | Gly | Glu | Met | Ala |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Asp | Cys | Cys | Ala | Lys | Gln | Glu | Pro | Glu | Arg | Asn | Glu | Cys | Phe | Leu | Gln |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| His | Lys | Asp | Asp | Asn | Pro | Asn | Leu | Pro | Arg | Leu | Val | Arg | Pro | Glu | Val |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Asp | Val | Met | Cys | Thr | Ala | Phe | His | Asp | Asn | Glu | Glu | Thr | Phe | Leu | Lys |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Lys | Tyr | Leu | Tyr | Glu | Ile | Ala | Arg | Arg | His | Pro | Tyr | Phe | Tyr | Ala | Pro |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Glu | Leu | Leu | Phe | Phe | Ala | Lys | Arg | Tyr | Lys | Ala | Ala | Phe | Thr | Glu | Cys |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala | Cys | Leu | Leu | Pro | Lys | Leu | Asp | Glu |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser | Ser | Ala | Lys | Gln | Arg | Leu | Lys | Cys |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe | Lys | Ala | Trp | Ala | Val |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu | Phe | Ala | Glu | Val | Ser |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | Val | His | Thr | Glu | Cys | Cys | His | Gly |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | Arg | Ala | Asp | Leu | Ala | Lys | Tyr | Ile |
| | 275 | | | | | | 280 | | | | | 285 | | | |
| Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu | Lys | Glu | Cys | Cys | Glu |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | Cys | Ile | Ala | Glu | Val | Glu | Asn | Asp |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | Leu | Ala | Ala | Asp | Phe | Val | Glu | Ser |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys | Asp | Val | Phe | Leu | Gly |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | Arg | His | Pro | Asp | Tyr | Ser | Val | Val |
| | 355 | | | | | | 360 | | | | | 365 | | | |
| Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | Tyr | Glu | Thr | Thr | Leu | Glu | Lys | Cys |

| 370 | 375 | 380 |
|--|-----|-----|
| Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu 385 390 395 400 | | |
| Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys 405 410 415 | | |
| Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu 420 425 430 | | |
| Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val 435 440 445 | | |
| Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His 450 455 460 | | |
| Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val 465 470 475 480 | | |
| Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg 485 490 495 | | |
| Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 500 505 510 | | |
| Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala 515 520 525 | | |
| Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 530 535 540 | | |
| Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 545 550 555 560 | | |
| Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 565 570 575 | | |
| Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 580 585 590 | | |
| Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly 595 600 605 | | |
| Leu Val Pro Ile Gln Lys Val Gln Asp Asp Thr Lys Thr Leu Ile Lys 610 615 620 | | |
| Thr Ile Val Thr Arg Ile Asn Asp Ile Ser His Thr Gln Ser Val Ser 625 630 635 640 | | |
| Ser Lys Gln Lys Val Thr Gly Leu Asp Phe Ile Pro Gly Leu His Pro 645 650 655 | | |
| Ile Leu Thr Leu Ser Lys Met Asp Gln Thr Leu Ala Val Tyr Gln Gln 660 665 670 | | |
| Ile Leu Thr Ser Met Pro Ser Arg Asn Val Ile Gln Ile Ser Asn Asp 675 680 685 | | |
| Leu Glu Asn Leu Arg Asp Leu Leu His Val Leu Ala Phe Ser Lys Ser 690 695 700 | | |
| Cys His Leu Pro Trp Ala Ser Gly Leu Glu Thr Leu Asp Ser Leu Gly | | |

705 710 715 720
 Gly Val Leu Glu Ala Ser Gly Tyr Ser Thr Glu Val Val Ala Leu Ser
 725 730 735
 Arg Leu Gln Gly Ser Leu Gln Asp Met Leu Trp Gln Leu Asp Leu Ser
 740 745 750
 Pro Gly Cys
 755

 <210> 343
 <211> 788
 <212> PRT
 <213> Homo sapiens

 <400> 343
 Met Lys Val Ser Val Ala Ala Leu Ser Cys Leu Met Leu Val Thr Ala
 1 5 10 15
 Leu Gly Ser Gln Ala Ala Thr Lys Leu Thr Glu Glu Lys Tyr Glu Leu
 20 25 30
 Lys Glu Gly Gln Thr Leu Asp Val Lys Cys Asp Tyr Thr Leu Glu Lys
 35 40 45
 Phe Ala Ser Ser Gln Lys Ala Trp Gln Ile Ile Arg Asp Gly Glu Met
 50 55 60
 Pro Lys Thr Leu Ala Cys Thr Glu Arg Pro Ser Lys Asn Ser His Pro
 65 70 75 80
 Val Gln Val Gly Arg Ile Ile Leu Glu Asp Tyr His Asp His Gly Leu
 85 90 95
 Leu Arg Val Arg Met Val Asn Leu Gln Val Glu Asp Ser Gly Leu Tyr
 100 105 110
 Gln Cys Val Ile Tyr Gln Pro Pro Lys Glu Pro His Met Leu Phe Asp
 115 120 125
 Arg Ile Arg Leu Val Val Thr Lys Gly Phe Ser Gly Thr Pro Gly Ser
 130 135 140
 Asn Glu Asn Ser Thr Gln Asn Val Tyr Lys Ile Pro Pro Thr Thr Thr
 145 150 155 160
 Lys Ala Leu Cys Pro Leu Tyr Thr Ser Pro Arg Thr Val Thr Gln Ala
 165 170 175
 Pro Pro Lys Ser Thr Ala Asp Val Ser Thr Pro Asp Ser Glu Ile Asn
 180 185 190
 Leu Thr Asn Val Thr Asp Ile Ile Arg Val Pro Asp Ala His Lys Ser
 195 200 205
 Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala
 210 215 220
 Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu
 225 230 235 240

Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys
 245 250 255
 Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu
 260 265 270
 Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly
 275 280 285
 Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys
 290 295 300
 Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg
 305 310 315 320
 Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr
 325 330 335
 Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe
 340 345 350
 Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe
 355 360 365
 Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys
 370 375 380
 Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg
 385 390 395 400
 Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala
 405 410 415
 Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala
 420 425 430
 Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys
 435 440 445
 Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala
 450 455 460
 Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu
 465 470 475 480
 Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val
 485 490 495
 Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe
 500 505 510
 Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val
 515 520 525
 Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr
 530 535 540
 Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu
 545 550 555 560
 Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val
 565 570 575

Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys
 580 585 590
 Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn
 595 600 605
 Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro
 610 615 620
 Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys
 625 630 635 640
 Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu
 645 650 655
 Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val
 660 665 670
 Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg
 675 680 685
 Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu
 690 695 700
 Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser
 705 710 715 720
 Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val
 725 730 735
 Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp
 740 745 750
 Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu
 755 760 765
 Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala
 770 775 780
 Ala Leu Gly Leu
 785

<210> 344
 <211> 787
 <212> PRT
 <213> Homo sapiens

<400> 344
 Met Arg Lys Thr Arg Leu Trp Gly Leu Leu Trp Met Leu Phe Val Ser
 1 5 10 15
 Glu Leu Arg Ala Ala Thr Lys Leu Thr Glu Glu Lys Tyr Glu Leu Lys
 20 25 30
 Glu Gly Gln Thr Leu Asp Val Lys Cys Asp Tyr Thr Leu Glu Lys Phe
 35 40 45
 Ala Ser Ser Gln Lys Ala Trp Gln Ile Ile Arg Asp Gly Glu Met Pro
 50 55 60
 Lys Thr Leu Ala Cys Thr Glu Arg Pro Ser Lys Asn Ser His Pro Val
 65 70 75 80

Gln Val Gly Arg Ile Ile Leu Glu Asp Tyr His Asp His Gly Leu Leu
 85 90 95
 Arg Val Arg Met Val Asn Leu Gln Val Glu Asp Ser Gly Leu Tyr Gln
 100 105 110
 Cys Val Ile Tyr Gln Pro Pro Lys Glu Pro His Met Leu Phe Asp Arg
 115 120 125
 Ile Arg Leu Val Val Thr Lys Gly Phe Ser Gly Thr Pro Gly Ser Asn
 130 135 140
 Glu Asn Ser Thr Gln Asn Val Tyr Lys Ile Pro Pro Thr Thr Thr Lys
 145 150 155 160
 Ala Leu Cys Pro Leu Tyr Thr Ser Pro Arg Thr Val Thr Gln Ala Pro
 165 170 175
 Pro Lys Ser Thr Ala Asp Val Ser Thr Pro Asp Ser Glu Ile Asn Leu
 180 185 190
 Thr Asn Val Thr Asp Ile Ile Arg Val Pro Asp Ala His Lys Ser Glu
 195 200 205
 Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu
 210 215 220
 Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp
 225 230 235 240
 His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val
 245 250 255
 Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe
 260 265 270
 Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu
 275 280 285
 Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe
 290 295 300
 Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro
 305 310 315 320
 Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe
 325 330 335
 Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr
 340 345 350
 Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr
 355 360 365
 Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu
 370 375 380
 Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu
 385 390 395 400
 Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp
 405 410 415

Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu
 420 425 430
 Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys
 435 440 445
 His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys
 450 455 460
 Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys
 465 470 475 480
 Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu
 485 490 495
 Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val
 500 505 510
 Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe
 515 520 525
 Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser
 530 535 540
 Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu
 545 550 555 560
 Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe
 565 570 575
 Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln
 580 585 590
 Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala
 595 600 605
 Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr
 610 615 620
 Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys
 625 630 635 640
 Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser
 645 650 655
 Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser
 660 665 670
 Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro
 675 680 685
 Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe
 690 695 700
 Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu
 705 710 715 720
 Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys
 725 730 735
 His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp
 740 745 750

Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr
 755 760 765
 Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala
 770 775 780
 Leu Gly Leu
 785

<210> 345
 <211> 691
 <212> PRT
 <213> Homo sapiens

<400> 345
 Met Lys Val Ser Val Ala Ala Leu Ser Cys Leu Met Leu Val Thr Ala
 1 5 10 15
 Leu Gly Ser Gln Ala Met Gln Val Gly Thr Asn Lys Glu Leu Cys Cys
 20 25 30
 Leu Val Tyr Thr Ser Trp Gln Ile Pro Gln Lys Phe Ile Val Asp Tyr
 35 40 45
 Ser Glu Thr Ser Pro Gln Cys Pro Lys Pro Gly Val Ile Leu Leu Thr
 50 55 60
 Lys Arg Gly Arg Gln Ile Cys Ala Asp Pro Asn Lys Lys Trp Val Gln
 65 70 75 80
 Lys Tyr Ile Ser Asp Leu Lys Leu Asn Ala Ser Gly Gly Gly Gly Ser
 85 90 95
 Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ala His Lys Ser Glu
 100 105 110
 Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu
 115 120 125
 Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp
 130 135 140
 His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val
 145 150 155 160
 Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe
 165 170 175
 Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu
 180 185 190
 Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe
 195 200 205
 Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro
 210 215 220
 Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe
 225 230 235 240

Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr
 245 250 255
 Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr
 260 265 270
 Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu
 275 280 285
 Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu
 290 295 300
 Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp
 305 310 315 320
 Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu
 325 330 335
 Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys
 340 345 350
 His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys
 355 360 365
 Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys
 370 375 380
 Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu
 385 390 395 400
 Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val
 405 410 415
 Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe
 420 425 430
 Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser
 435 440 445
 Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu
 450 455 460
 Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe
 465 470 475 480
 Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln
 485 490 495
 Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala
 500 505 510
 Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr
 515 520 525
 Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys
 530 535 540
 Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser
 545 550 555 560
 Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser
 565 570 575

Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro
 580 585 590
 Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe
 595 600 605
 Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu
 610 615 620
 Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys
 625 630 635 640
 His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp
 645 650 655
 Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr
 660 665 670
 Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala
 675 680 685
 Leu Gly Leu
 690

<210> 346
 <211> 694
 <212> PRT
 <213> Homo sapiens

<400> 346
 Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1 5 10 15
 Tyr Ser Arg Ser Leu Asp Lys Arg Asp Ala His Lys Ser Glu Val Ala
 20 25 30
 His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
 35 40 45
 Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
 50 55 60
 Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
 65 70 75 80
 Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
 85 90 95
 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
 100 105 110
 Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln
 115 120 125
 His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
 130 135 140
 Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys
 145 150 155 160
 Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro
 165 170 175

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Glu | Leu | Leu | Phe | Phe | Ala | Lys | Arg | Tyr | Lys | Ala | Ala | Phe | Thr | Glu | Cys | |
| | | | 180 | | | | | 185 | | | | | 190 | | | |
| Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala | Cys | Leu | Leu | Pro | Lys | Leu | Asp | Glu | |
| | | 195 | | | | | 200 | | | | | 205 | | | | |
| Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser | Ser | Ala | Lys | Gln | Arg | Leu | Lys | Cys | |
| | 210 | | | | | 215 | | | | | 220 | | | | | |
| Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe | Lys | Ala | Trp | Ala | Val | |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 | |
| Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu | Phe | Ala | Glu | Val | Ser | |
| | | | | 245 | | | | | 250 | | | | | 255 | | |
| Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | Val | His | Thr | Glu | Cys | Cys | His | Gly | |
| | | | 260 | | | | | 265 | | | | | 270 | | | |
| Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | Arg | Ala | Asp | Leu | Ala | Lys | Tyr | Ile | |
| | 275 | | | | | | 280 | | | | | 285 | | | | |
| Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu | Lys | Glu | Cys | Cys | Glu | |
| | 290 | | | | | 295 | | | | | 300 | | | | | |
| Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | Cys | Ile | Ala | Glu | Val | Glu | Asn | Asp | |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 | |
| Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | Leu | Ala | Ala | Asp | Phe | Val | Glu | Ser | |
| | | | | 325 | | | | | 330 | | | | | 335 | | |
| Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys | Asp | Val | Phe | Leu | Gly | |
| | | | 340 | | | | | 345 | | | | | 350 | | | |
| Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | Arg | His | Pro | Asp | Tyr | Ser | Val | Val | |
| | 355 | | | | | | 360 | | | | | 365 | | | | |
| Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | Tyr | Glu | Thr | Thr | Leu | Glu | Lys | Cys | |
| | 370 | | | | | 375 | | | | | 380 | | | | | |
| Cys | Ala | Ala | Ala | Asp | Pro | His | Glu | Cys | Tyr | Ala | Lys | Val | Phe | Asp | Glu | |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 | |
| Phe | Lys | Pro | Leu | Val | Glu | Glu | Pro | Gln | Asn | Leu | Ile | Lys | Gln | Asn | Cys | |
| | | | | 405 | | | | | 410 | | | | | 415 | | |
| Glu | Leu | Phe | Glu | Gln | Leu | Gly | Glu | Tyr | Lys | Phe | Gln | Asn | Ala | Leu | Leu | |
| | | | 420 | | | | | 425 | | | | | 430 | | | |
| Val | Arg | Tyr | Thr | Lys | Lys | Val | Pro | Gln | Val | Ser | Thr | Pro | Thr | Leu | Val | |
| | | 435 | | | | | 440 | | | | | 445 | | | | |
| Glu | Val | Ser | Arg | Asn | Leu | Gly | Lys | Val | Gly | Ser | Lys | Cys | Cys | Lys | His | |
| | 450 | | | | | 455 | | | | | 460 | | | | | |
| Pro | Glu | Ala | Lys | Arg | Met | Pro | Cys | Ala | Glu | Asp | Tyr | Leu | Ser | Val | Val | |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 | |
| Leu | Asn | Gln | Leu | Cys | Val | Leu | His | Glu | Lys | Thr | Pro | Val | Ser | Asp | Arg | |
| | | | | 485 | | | | | 490 | | | | | 495 | | |
| Val | Thr | Lys | Cys | Cys | Thr | Glu | Ser | Leu | Val | Asn | Arg | Arg | Pro | Cys | Phe | |
| | | | 500 | | | | | 505 | | | | | 510 | | | |

Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala
 515 520 525
 Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu
 530 535 540
 Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys
 545 550 555 560
 Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala
 565 570 575
 Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe
 580 585 590
 Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
 595 600 605
 Leu Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
 610 615 620
 Ser Met Gln Val Gly Thr Asn Lys Glu Leu Cys Cys Leu Val Tyr Thr
 625 630 635 640
 Ser Trp Gln Ile Pro Gln Lys Phe Ile Val Asp Tyr Ser Glu Thr Ser
 645 650 655
 Pro Gln Cys Pro Lys Pro Gly Val Ile Leu Leu Thr Lys Arg Gly Arg
 660 665 670
 Gln Ile Cys Ala Asp Pro Asn Lys Lys Trp Val Gln Lys Tyr Ile Ser
 675 680 685
 Asp Leu Lys Leu Asn Ala
 690

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 <212> PRT
 <213> Homo sapiens

<400> 347
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 20 25 30
 Gly Gly Gly Lys Arg Phe Ser His Ser Gly Asn Gln Leu Asp Gly Pro
 35 40 45
 Ile Thr Ala Leu Arg Val Arg Val Asn Thr Tyr Tyr Ile Val Gly Leu
 50 55 60
 Gln Val Arg Tyr Gly Lys Val Trp Ser Asp Tyr Val Gly Gly Arg Asn
 65 70 75 80
 Gly Asp Leu Glu Glu Ile Phe Leu His Pro Gly Glu Ser Val Ile Gln
 85 90 95
 Val Ser Gly Lys Tyr Lys Trp Tyr Leu Lys Lys Leu Val Phe Val Thr

| 100 | | | | | 105 | | | | | 110 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Lys | Gly | Arg | Tyr | Leu | Ser | Phe | Gly | Lys | Asp | Ser | Gly | Thr | Ser | Phe |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Asn | Ala | Val | Pro | Leu | His | Pro | Asn | Thr | Val | Leu | Arg | Phe | Ile | Ser | Gly |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Arg | Ser | Gly | Ser | Leu | Ile | Asp | Ala | Ile | Gly | Leu | His | Trp | Asp | Val | Tyr |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Pro | Thr | Ser | Cys | Ser | Arg | Cys | Asp | Ala | His | Lys | Ser | Glu | Val | Ala | His |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Arg | Asp | Ala | His | Lys | Ser | Glu | Val | Ala | His | Arg | Phe | Lys | Asp | Leu | Gly |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Glu | Glu | Asn | Phe | Lys | Ala | Leu | Val | Leu | Ile | Ala | Phe | Ala | Gln | Tyr | Leu |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Gln | Gln | Cys | Pro | Phe | Glu | Asp | His | Val | Lys | Leu | Val | Asn | Glu | Val | Thr |
| | 210 | | | | | 215 | | | | | | 220 | | | |
| Glu | Phe | Ala | Lys | Thr | Cys | Val | Ala | Asp | Glu | Ser | Ala | Glu | Asn | Cys | Asp |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Lys | Ser | Leu | His | Thr | Leu | Phe | Gly | Asp | Lys | Leu | Cys | Thr | Val | Ala | Thr |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Leu | Arg | Glu | Thr | Tyr | Gly | Glu | Met | Ala | Asp | Cys | Cys | Ala | Lys | Gln | Glu |
| | | | 260 | | | | 265 | | | | | | 270 | | |
| Pro | Glu | Arg | Asn | Glu | Cys | Phe | Leu | Gln | His | Lys | Asp | Asp | Asn | Pro | Asn |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Leu | Pro | Arg | Leu | Val | Arg | Pro | Glu | Val | Asp | Val | Met | Cys | Thr | Ala | Phe |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| His | Asp | Asn | Glu | Glu | Thr | Phe | Leu | Lys | Lys | Tyr | Leu | Tyr | Glu | Ile | Ala |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Arg | Arg | His | Pro | Tyr | Phe | Tyr | Ala | Pro | Glu | Leu | Leu | Phe | Phe | Ala | Lys |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Arg | Tyr | Lys | Ala | Ala | Phe | Thr | Glu | Cys | Cys | Gln | Ala | Ala | Asp | Lys | Ala |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Ala | Cys | Leu | Leu | Pro | Lys | Leu | Asp | Glu | Leu | Arg | Asp | Glu | Gly | Lys | Ala |
| | | 355 | | | | | 360 | | | | | 365 | | | |
| Ser | Ser | Ala | Lys | Gln | Arg | Leu | Lys | Cys | Ala | Ser | Leu | Gln | Lys | Phe | Gly |
| | 370 | | | | | 375 | | | | | 380 | | | | |
| Glu | Arg | Ala | Phe | Lys | Ala | Trp | Ala | Val | Ala | Arg | Leu | Ser | Gln | Arg | Phe |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Pro | Lys | Ala | Glu | Phe | Ala | Glu | Val | Ser | Lys | Leu | Val | Thr | Asp | Leu | Thr |
| | | | | 405 | | | | | 410 | | | | | 415 | |
| Lys | Val | His | Thr | Glu | Cys | Cys | His | Gly | Asp | Leu | Leu | Glu | Cys | Ala | Asp |
| | | | 420 | | | | | 425 | | | | | 430 | | |
| Asp | Arg | Ala | Asp | Leu | Ala | Lys | Tyr | Ile | Cys | Glu | Asn | Gln | Asp | Ser | Ile |

| 435 | | | | | 440 | | | | | 445 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Ser | Lys | Leu | Lys | Glu | Cys | Cys | Glu | Lys | Pro | Leu | Leu | Glu | Lys | Ser |
| 450 | | | | | | 455 | | | | | 460 | | | | |
| His | Cys | Ile | Ala | Glu | Val | Glu | Asn | Asp | Glu | Met | Pro | Ala | Asp | Leu | Pro |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 |
| Ser | Leu | Ala | Ala | Asp | Phe | Val | Glu | Ser | Lys | Asp | Val | Cys | Lys | Asn | Tyr |
| | | | | 485 | | | | | 490 | | | | | 495 | |
| Ala | Glu | Ala | Lys | Asp | Val | Phe | Leu | Gly | Met | Phe | Leu | Tyr | Glu | Tyr | Ala |
| | | | 500 | | | | | 505 | | | | | 510 | | |
| Arg | Arg | His | Pro | Asp | Tyr | Ser | Val | Val | Leu | Leu | Leu | Arg | Leu | Ala | Lys |
| | | 515 | | | | | 520 | | | | | 525 | | | |
| Thr | Tyr | Glu | Thr | Thr | Leu | Glu | Lys | Cys | Cys | Ala | Ala | Ala | Asp | Pro | His |
| | 530 | | | | | 535 | | | | | 540 | | | | |
| Glu | Cys | Tyr | Ala | Lys | Val | Phe | Asp | Glu | Phe | Lys | Pro | Leu | Val | Glu | Glu |
| 545 | | | | | 550 | | | | | 555 | | | | | 560 |
| Pro | Gln | Asn | Leu | Ile | Lys | Gln | Asn | Cys | Glu | Leu | Phe | Glu | Gln | Leu | Gly |
| | | | | 565 | | | | | 570 | | | | | 575 | |
| Glu | Tyr | Lys | Phe | Gln | Asn | Ala | Leu | Leu | Val | Arg | Tyr | Thr | Lys | Lys | Val |
| | | | 580 | | | | | 585 | | | | | 590 | | |
| Pro | Gln | Val | Ser | Thr | Pro | Thr | Leu | Val | Glu | Val | Ser | Arg | Asn | Leu | Gly |
| | | 595 | | | | | 600 | | | | | 605 | | | |
| Lys | Val | Gly | Ser | Lys | Cys | Cys | Lys | His | Pro | Glu | Ala | Lys | Arg | Met | Pro |
| | 610 | | | | | 615 | | | | | 620 | | | | |
| Cys | Ala | Glu | Asp | Tyr | Leu | Ser | Val | Val | Leu | Asn | Gln | Leu | Cys | Val | Leu |
| 625 | | | | | 630 | | | | | 635 | | | | | 640 |
| His | Glu | Lys | Thr | Pro | Val | Ser | Asp | Arg | Val | Thr | Lys | Cys | Cys | Thr | Glu |
| | | | | 645 | | | | | 650 | | | | | 655 | |
| Ser | Leu | Val | Asn | Arg | Arg | Pro | Cys | Phe | Ser | Ala | Leu | Glu | Val | Asp | Glu |
| | | | 660 | | | | | 665 | | | | | 670 | | |
| Thr | Tyr | Val | Pro | Lys | Glu | Phe | Asn | Ala | Glu | Thr | Phe | Thr | Phe | His | Ala |
| | 675 | | | | | 680 | | | | | | 685 | | | |
| Asp | Ile | Cys | Thr | Leu | Ser | Glu | Lys | Glu | Arg | Gln | Ile | Lys | Lys | Gln | Thr |
| | 690 | | | | | 695 | | | | | 700 | | | | |
| Ala | Leu | Val | Glu | Leu | Val | Lys | His | Lys | Pro | Lys | Ala | Thr | Lys | Glu | Gln |
| 705 | | | | | 710 | | | | | 715 | | | | | 720 |
| Leu | Lys | Ala | Val | Met | Asp | Asp | Phe | Ala | Ala | Phe | Val | Glu | Lys | Cys | Cys |
| | | | | 725 | | | | | 730 | | | | | 735 | |
| Lys | Ala | Asp | Asp | Lys | Glu | Thr | Cys | Phe | Ala | Glu | Glu | Gly | Lys | Lys | Leu |
| | | | 740 | | | | | 745 | | | | | 750 | | |
| Val | Ala | Ala | Ser | Gln | Ala | Ala | Leu | Gly | Leu | | | | | | |
| | 755 | | | | | | 760 | | | | | | | | |

<210> 348
 <211> 693
 <212> PRT
 <213> Homo sapiens

<400> 348

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Lys | Trp | Val | Ser | Phe | Ile | Ser | Leu | Leu | Phe | Leu | Phe | Ser | Ser | Ala |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Tyr | Ser | Arg | Ser | Leu | Asp | Lys | Arg | Asp | Ala | His | Lys | Ser | Glu | Val | Ala |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| His | Arg | Phe | Lys | Asp | Leu | Gly | Glu | Glu | Asn | Phe | Lys | Ala | Leu | Val | Leu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ile | Ala | Phe | Ala | Gln | Tyr | Leu | Gln | Gln | Cys | Pro | Phe | Glu | Asp | His | Val |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Lys | Leu | Val | Asn | Glu | Val | Thr | Glu | Phe | Ala | Lys | Thr | Cys | Val | Ala | Asp |
| | 65 | | | | 70 | | | | | 75 | | | | | 80 |
| Glu | Ser | Ala | Glu | Asn | Cys | Asp | Lys | Ser | Leu | His | Thr | Leu | Phe | Gly | Asp |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Lys | Leu | Cys | Thr | Val | Ala | Thr | Leu | Arg | Glu | Thr | Tyr | Gly | Glu | Met | Ala |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Asp | Cys | Cys | Ala | Lys | Gln | Glu | Pro | Glu | Arg | Asn | Glu | Cys | Phe | Leu | Gln |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| His | Lys | Asp | Asp | Asn | Pro | Asn | Leu | Pro | Arg | Leu | Val | Arg | Pro | Glu | Val |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Asp | Val | Met | Cys | Thr | Ala | Phe | His | Asp | Asn | Glu | Glu | Thr | Phe | Leu | Lys |
| | 145 | | | | 150 | | | | | 155 | | | | | 160 |
| Lys | Tyr | Leu | Tyr | Glu | Ile | Ala | Arg | Arg | His | Pro | Tyr | Phe | Tyr | Ala | Pro |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Glu | Leu | Leu | Phe | Phe | Ala | Lys | Arg | Tyr | Lys | Ala | Ala | Phe | Thr | Glu | Cys |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala | Cys | Leu | Leu | Pro | Lys | Leu | Asp | Glu |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser | Ser | Ala | Lys | Gln | Arg | Leu | Lys | Cys |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe | Lys | Ala | Trp | Ala | Val |
| | 225 | | | | 230 | | | | | 235 | | | | | 240 |
| Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu | Phe | Ala | Glu | Val | Ser |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | Val | His | Thr | Glu | Cys | Cys | His | Gly |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | Arg | Ala | Asp | Leu | Ala | Lys | Tyr | Ile |
| | 275 | | | | | | 280 | | | | | 285 | | | |
| Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu | Lys | Glu | Cys | Cys | Glu |
| | 290 | | | | | 295 | | | | | 300 | | | | |

Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp
 305 310 315 320
 Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser
 325 330 335
 Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly
 340 345 350
 Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val
 355 360 365
 Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys
 370 375 380
 Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu
 385 390 395 400
 Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys
 405 410 415
 Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu
 420 425 430
 Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val
 435 440 445
 Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His
 450 455 460
 Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val
 465 470 475 480
 Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg
 485 490 495
 Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe
 500 505 510
 Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala
 515 520 525
 Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu
 530 535 540
 Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys
 545 550 555 560
 Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala
 565 570 575
 Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe
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 Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
 595 600 605
 Leu Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
 610 615 620
 Ser Gln Val Gly Thr Asn Lys Glu Leu Cys Cys Leu Val Tyr Thr Ser
 625 630 635 640

Trp Gln Ile Pro Gln Lys Phe Ile Val Asp Tyr Ser Glu Thr Ser Pro
 645 650 655
 Gln Cys Pro Lys Pro Gly Val Ile Leu Leu Thr Lys Arg Gly Arg Gln
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 Ile Cys Ala Asp Pro Asn Lys Lys Trp Val Gln Lys Tyr Ile Ser Asp
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 Leu Lys Leu Asn Ala
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<400> 349
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 Leu Cys Cys Leu Val Tyr Thr Ser Trp Gln Ile Pro Gln Lys Phe Ile
 35 40 45
 Val Asp Tyr Ser Glu Thr Ser Pro Gln Cys Pro Lys Pro Gly Val Ile
 50 55 60
 Leu Leu Thr Lys Arg Gly Arg Gln Ile Cys Ala Asp Pro Asn Lys Lys
 65 70 75 80
 Trp Val Gln Lys Tyr Ile Ser Asp Leu Lys Leu Asn Ala Asp Ala His
 85 90 95
 Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe
 100 105 110
 Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro
 115 120 125
 Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys
 130 135 140
 Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His
 145 150 155 160
 Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr
 165 170 175
 Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn
 180 185 190
 Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu
 195 200 205
 Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu
 210 215 220

| | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Thr | Phe | Leu | Lys | Lys | Tyr | Leu | Tyr | Glu | Ile | Ala | Arg | Arg | His | Pro | 225 | 230 | 235 | 240 |
| Tyr | Phe | Tyr | Ala | Pro | Glu | Leu | Leu | Phe | Phe | Ala | Lys | Arg | Tyr | Lys | Ala | 245 | 250 | 255 | |
| Ala | Phe | Thr | Glu | Cys | Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala | Cys | Leu | Leu | 260 | 265 | 270 | |
| Pro | Lys | Leu | Asp | Glu | Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser | Ser | Ala | Lys | 275 | 280 | 285 | |
| Gln | Arg | Leu | Lys | Cys | Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe | 290 | 295 | 300 | |
| Lys | Ala | Trp | Ala | Val | Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu | 305 | 310 | 315 | 320 |
| Phe | Ala | Glu | Val | Ser | Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | Val | His | Thr | 325 | 330 | 335 | |
| Glu | Cys | Cys | His | Gly | Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | Arg | Ala | Asp | 340 | 345 | 350 | |
| Leu | Ala | Lys | Tyr | Ile | Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu | 355 | 360 | 365 | |
| Lys | Glu | Cys | Cys | Glu | Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | Cys | Ile | Ala | 370 | 375 | 380 | |
| Glu | Val | Glu | Asn | Asp | Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | Leu | Ala | Ala | 385 | 390 | 395 | 400 |
| Asp | Phe | Val | Glu | Ser | Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys | 405 | 410 | 415 | |
| Asp | Val | Phe | Leu | Gly | Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | Arg | His | Pro | 420 | 425 | 430 | |
| Asp | Tyr | Ser | Val | Val | Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | Tyr | Glu | Thr | 435 | 440 | 445 | |
| Thr | Leu | Glu | Lys | Cys | Cys | Ala | Ala | Ala | Asp | Pro | His | Glu | Cys | Tyr | Ala | 450 | 455 | 460 | |
| Lys | Val | Phe | Asp | Glu | Phe | Lys | Pro | Leu | Val | Glu | Glu | Pro | Gln | Asn | Leu | 465 | 470 | 475 | 480 |
| Ile | Lys | Gln | Asn | Cys | Glu | Leu | Phe | Glu | Gln | Leu | Gly | Glu | Tyr | Lys | Phe | 485 | 490 | 495 | |
| Gln | Asn | Ala | Leu | Leu | Val | Arg | Tyr | Thr | Lys | Lys | Val | Pro | Gln | Val | Ser | 500 | 505 | 510 | |
| Thr | Pro | Thr | Leu | Val | Glu | Val | Ser | Arg | Asn | Leu | Gly | Lys | Val | Gly | Ser | 515 | 520 | 525 | |
| Lys | Cys | Cys | Lys | His | Pro | Glu | Ala | Lys | Arg | Met | Pro | Cys | Ala | Glu | Asp | 530 | 535 | 540 | |
| Tyr | Leu | Ser | Val | Val | Leu | Asn | Gln | Leu | Cys | Val | Leu | His | Glu | Lys | Thr | 545 | 550 | 555 | 560 |

[illegible]

| 165 | | | | | 170 | | | | | 175 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Gly | Glu | Met | Ala | Asp | Cys | Cys | Ala | Lys | Gln | Glu | Pro | Glu | Arg | Asn |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Glu | Cys | Phe | Leu | Gln | His | Lys | Asp | Asp | Asn | Pro | Asn | Leu | Pro | Arg | Leu |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Val | Arg | Pro | Glu | Val | Asp | Val | Met | Cys | Thr | Ala | Phe | His | Asp | Asn | Glu |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Glu | Thr | Phe | Leu | Lys | Lys | Tyr | Leu | Tyr | Glu | Ile | Ala | Arg | Arg | His | Pro |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Tyr | Phe | Tyr | Ala | Pro | Glu | Leu | Leu | Phe | Phe | Ala | Lys | Arg | Tyr | Lys | Ala |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Ala | Phe | Thr | Glu | Cys | Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala | Cys | Leu | Leu |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Pro | Lys | Leu | Asp | Glu | Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser | Ser | Ala | Lys |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Gln | Arg | Leu | Lys | Cys | Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Lys | Ala | Trp | Ala | Val | Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Phe | Ala | Glu | Val | Ser | Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | Val | His | Thr |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Glu | Cys | Cys | His | Gly | Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | Arg | Ala | Asp |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Leu | Ala | Lys | Tyr | Ile | Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu |
| | 355 | | | | | | 360 | | | | | 365 | | | |
| Lys | Glu | Cys | Cys | Glu | Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | Cys | Ile | Ala |
| | 370 | | | | | 375 | | | | | 380 | | | | |
| Glu | Val | Glu | Asn | Asp | Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | Leu | Ala | Ala |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Asp | Phe | Val | Glu | Ser | Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys |
| | | | | 405 | | | | | 410 | | | | | 415 | |
| Asp | Val | Phe | Leu | Gly | Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | Arg | His | Pro |
| | | | 420 | | | | | 425 | | | | | 430 | | |
| Asp | Tyr | Ser | Val | Val | Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | Tyr | Glu | Thr |
| | | 435 | | | | | 440 | | | | | 445 | | | |
| Thr | Leu | Glu | Lys | Cys | Cys | Ala | Ala | Ala | Asp | Pro | His | Glu | Cys | Tyr | Ala |
| | 450 | | | | | 455 | | | | | 460 | | | | |
| Lys | Val | Phe | Asp | Glu | Phe | Lys | Pro | Leu | Val | Glu | Glu | Pro | Gln | Asn | Leu |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 |
| Ile | Lys | Gln | Asn | Cys | Glu | Leu | Phe | Glu | Gln | Leu | Gly | Glu | Tyr | Lys | Phe |
| | | | | 485 | | | | | 490 | | | | | 495 | |
| Gln | Asn | Ala | Leu | Leu | Val | Arg | Tyr | Thr | Lys | Lys | Val | Pro | Gln | Val | Ser |

| 500 | | | | | 505 | | | | | 510 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Thr | Pro | Thr | Leu | Val | Glu | Val | Ser | Arg | Asn | Leu | Gly | Lys | Val | Gly | Ser |
| | | 515 | | | | | 520 | | | | | 525 | | | |
| Lys | Cys | Cys | Lys | His | Pro | Glu | Ala | Lys | Arg | Met | Pro | Cys | Ala | Glu | Asp |
| | | 530 | | | | | 535 | | | | | 540 | | | |
| Tyr | Leu | Ser | Val | Val | Leu | Asn | Gln | Leu | Cys | Val | Leu | His | Glu | Lys | Thr |
| | | | | | | | 550 | | | | | | | | 560 |
| Pro | Val | Ser | Asp | Arg | Val | Thr | Lys | Cys | Cys | Thr | Glu | Ser | Leu | Val | Asn |
| | | | | 565 | | | | | | | | | | | 575 |
| Arg | Arg | Pro | Cys | Phe | Ser | Ala | Leu | Glu | Val | Asp | Glu | Thr | Tyr | Val | Pro |
| | | | | 580 | | | | | 585 | | | | | | 590 |
| Lys | Glu | Phe | Asn | Ala | Glu | Thr | Phe | Thr | Phe | His | Ala | Asp | Ile | Cys | Thr |
| | | | | 595 | | | | | 600 | | | | | | 605 |
| Leu | Ser | Glu | Lys | Glu | Arg | Gln | Ile | Lys | Lys | Gln | Thr | Ala | Leu | Val | Glu |
| | | | | 610 | | | | | | | | | | | 620 |
| Leu | Val | Lys | His | Lys | Pro | Lys | Ala | Thr | Lys | Glu | Gln | Leu | Lys | Ala | Val |
| | | | | | | | | | | | | | | | 640 |
| Met | Asp | Asp | Phe | Ala | Ala | Phe | Val | Glu | Lys | Cys | Cys | Lys | Ala | Asp | Asp |
| | | | | 645 | | | | | | | | | | | 655 |
| Lys | Glu | Thr | Cys | Phe | Ala | Glu | Glu | Gly | Lys | Lys | Leu | Val | Ala | Ala | Ser |
| | | | | 660 | | | | | 665 | | | | | | 670 |
| Gln | Ala | Ala | Leu | Gly | Leu | | | | | | | | | | |
| | | | | 675 | | | | | | | | | | | |

<210> 351
 <211> 694
 <212> PRT
 <213> Homo sapiens

| | | | | | | | | | | | | | | | |
|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <400> 351 | | | | | | | | | | | | | | | |
| Met | Lys | Trp | Val | Ser | Phe | Ile | Ser | Leu | Leu | Phe | Leu | Phe | Ser | Ser | Ala |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Tyr | Ser | Arg | Ser | Leu | Asp | Lys | Arg | Asp | Ala | His | Lys | Ser | Glu | Val | Ala |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| His | Arg | Phe | Lys | Asp | Leu | Gly | Glu | Asn | Phe | Lys | Ala | Leu | Val | Leu | |
| | | | 35 | | | | 40 | | | | 45 | | | | |
| Ile | Ala | Phe | Ala | Gln | Tyr | Leu | Gln | Gln | Cys | Pro | Phe | Glu | Asp | His | Val |
| | | | 50 | | | 55 | | | | | 60 | | | | |
| Lys | Leu | Val | Asn | Glu | Val | Thr | Glu | Phe | Ala | Lys | Thr | Cys | Val | Ala | Asp |
| | | | | | 70 | | | | | 75 | | | | | 80 |
| Glu | Ser | Ala | Glu | Asn | Cys | Asp | Lys | Ser | Leu | His | Thr | Leu | Phe | Gly | Asp |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Lys | Leu | Cys | Thr | Val | Ala | Thr | Leu | Arg | Glu | Thr | Tyr | Gly | Glu | Met | Ala |
| | | | | 100 | | | | 105 | | | | | 110 | | |

| | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Cys | Cys | Ala | Lys | Gln | Glu | Pro | Glu | Arg | Asn | Glu | Cys | Phe | Leu | Gln | 115 | 120 | 125 |
| His | Lys | Asp | Asp | Asn | Pro | Asn | Leu | Pro | Arg | Leu | Val | Arg | Pro | Glu | Val | 130 | 135 | 140 |
| Asp | Val | Met | Cys | Thr | Ala | Phe | His | Asp | Asn | Glu | Glu | Thr | Phe | Leu | Lys | 145 | 150 | 155 |
| Lys | Tyr | Leu | Tyr | Glu | Ile | Ala | Arg | Arg | His | Pro | Tyr | Phe | Tyr | Ala | Pro | 165 | 170 | 175 |
| Glu | Leu | Leu | Phe | Phe | Ala | Lys | Arg | Tyr | Lys | Ala | Ala | Phe | Thr | Glu | Cys | 180 | 185 | 190 |
| Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala | Cys | Leu | Leu | Pro | Lys | Leu | Asp | Glu | 195 | 200 | 205 |
| Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser | Ser | Ala | Lys | Gln | Arg | Leu | Lys | Cys | 210 | 215 | 220 |
| Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe | Lys | Ala | Trp | Ala | Val | 225 | 230 | 235 |
| Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu | Phe | Ala | Glu | Val | Ser | 245 | 250 | 255 |
| Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | Val | His | Thr | Glu | Cys | Cys | His | Gly | 260 | 265 | 270 |
| Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | Arg | Ala | Asp | Leu | Ala | Lys | Tyr | Ile | 275 | 280 | 285 |
| Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu | Lys | Glu | Cys | Cys | Glu | 290 | 295 | 300 |
| Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | Cys | Ile | Ala | Glu | Val | Glu | Asn | Asp | 305 | 310 | 315 |
| Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | Leu | Ala | Ala | Asp | Phe | Val | Glu | Ser | 325 | 330 | 335 |
| Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys | Asp | Val | Phe | Leu | Gly | 340 | 345 | 350 |
| Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | Arg | His | Pro | Asp | Tyr | Ser | Val | Val | 355 | 360 | 365 |
| Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | Tyr | Glu | Thr | Thr | Leu | Glu | Lys | Cys | 370 | 375 | 380 |
| Cys | Ala | Ala | Ala | Asp | Pro | His | Glu | Cys | Tyr | Ala | Lys | Val | Phe | Asp | Glu | 385 | 390 | 395 |
| Phe | Lys | Pro | Leu | Val | Glu | Glu | Pro | Gln | Asn | Leu | Ile | Lys | Gln | Asn | Cys | 405 | 410 | 415 |
| Glu | Leu | Phe | Glu | Gln | Leu | Gly | Glu | Tyr | Lys | Phe | Gln | Asn | Ala | Leu | Leu | 420 | 425 | 430 |
| Val | Arg | Tyr | Thr | Lys | Lys | Val | Pro | Gln | Val | Ser | Thr | Pro | Thr | Leu | Val | 435 | 440 | 445 |

Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His
 450 455 460
 Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val
 465 470 475 480
 Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg
 485 490 495
 Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe
 500 505 510
 Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala
 515 520 525
 Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu
 530 535 540
 Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys
 545 550 555 560
 Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala
 565 570 575
 Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe
 580 585 590
 Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
 595 600 605
 Leu Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly
 610 615 620
 Ser Met Gln Val Gly Thr Asn Lys Glu Leu Cys Cys Leu Val Tyr Thr
 625 630 635 640
 Ser Trp Gln Ile Pro Gln Lys Phe Ile Val Asp Tyr Ser Glu Thr Ser
 645 650 655
 Pro Gln Cys Pro Lys Pro Gly Val Ile Leu Leu Thr Lys Arg Gly Arg
 660 665 670
 Gln Ile Cys Ala Asp Pro Asn Lys Lys Trp Val Gln Lys Tyr Ile Ser
 675 680 685
 Asp Leu Lys Leu Asn Ala
 690

<210> 352
 <211> 774
 <212> PRT
 <213> Homo sapiens

<400> 352
 Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1 5 10 15
 Tyr Ser Arg Ser Leu Asp Lys Arg Cys Asp Leu Pro Gln Thr His Ser
 20 25 30
 Leu Gly Ser Arg Arg Thr Leu Met Leu Leu Ala Gln Met Arg Arg Ile
 35 40 45

Ser Leu Phe Ser Cys Leu Lys Asp Arg His Asp Phe Gly Phe Pro Gln
 50 55 60
 Glu Glu Phe Gly Asn Gln Phe Gln Lys Ala Glu Thr Ile Pro Val Leu
 65 70 75 80
 His Glu Met Ile Gln Gln Ile Phe Asn Leu Phe Ser Thr Lys Asp Ser
 85 90 95
 Ser Ala Ala Trp Asp Glu Thr Leu Leu Asp Lys Phe Tyr Thr Glu Leu
 100 105 110
 Tyr Gln Gln Leu Asn Asp Leu Glu Ala Cys Val Ile Gln Gly Val Gly
 115 120 125
 Val Thr Glu Thr Pro Leu Met Lys Glu Asp Ser Ile Leu Ala Val Arg
 130 135 140
 Lys Tyr Phe Gln Arg Ile Thr Leu Tyr Leu Lys Glu Lys Lys Tyr Ser
 145 150 155 160
 Pro Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Phe Ser
 165 170 175
 Leu Ser Thr Asn Leu Gln Glu Ser Leu Arg Ser Lys Glu Asp Ala His
 180 185 190
 Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe
 195 200 205
 Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro
 210 215 220
 Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys
 225 230 235 240
 Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His
 245 250 255
 Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr
 260 265 270
 Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn
 275 280 285
 Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu
 290 295 300
 Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu
 305 310 315 320
 Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro
 325 330 335
 Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala
 340 345 350
 Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu
 355 360 365
 Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys
 370 375 380

Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe
 385 390 395 400
 Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu
 405 410 415
 Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr
 420 425 430
 Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp
 435 440 445
 Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu
 450 455 460
 Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala
 465 470 475 480
 Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala
 485 490 495
 Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys
 500 505 510
 Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro
 515 520 525
 Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr
 530 535 540
 Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala
 545 550 555 560
 Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu
 565 570 575
 Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe
 580 585 590
 Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser
 595 600 605
 Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser
 610 615 620
 Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp
 625 630 635 640
 Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr
 645 650 655
 Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn
 660 665 670
 Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro
 675 680 685
 Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr
 690 695 700
 Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu
 705 710 715 720

Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val
 725 730 735
 Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp
 740 745 750
 Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser
 755 760 765
 Gln Ala Ala Leu Gly Leu
 770

<210> 353
 <211> 672
 <212> PRT
 <213> Homo sapiens

<400> 353
 Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1 5 10 15
 Tyr Ser Arg Gly Val Phe Arg Arg Asp Ala His Lys Ser Glu Val Ala
 20 25 30
 His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
 35 40 45
 Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
 50 55 60
 Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
 65 70 75 80
 Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
 85 90 95
 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
 100 105 110
 Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln
 115 120 125
 His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
 130 135 140
 Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys
 145 150 155 160
 Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro
 165 170 175
 Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys
 180 185 190
 Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu
 195 200 205
 Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys
 210 215 220

Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val
 225 230 235 240
 Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser
 245 250 255
 Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly
 260 265 270
 Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile
 275 280 285
 Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu
 290 295 300
 Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp
 305 310 315 320
 Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser
 325 330 335
 Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly
 340 345 350
 Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val
 355 360 365
 Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys
 370 375 380
 Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu
 385 390 395 400
 Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys
 405 410 415
 Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu
 420 425 430
 Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val
 435 440 445
 Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His
 450 455 460
 Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val
 465 470 475 480
 Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg
 485 490 495
 Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe
 500 505 510
 Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala
 515 520 525
 Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu
 530 535 540
 Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys
 545 550 555 560

Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala
 565 570 575
 Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe
 580 585 590
 Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
 595 600 605
 Leu Phe Val Asn Gln His Leu Cys Gly Ser His Leu Val Glu Ala Leu
 610 615 620
 Tyr Leu Val Cys Gly Glu Arg Gly Phe Phe Tyr Thr Pro Lys Thr Gly
 625 630 635 640
 Tyr Gly Ser Ser Ser Arg Arg Ala Pro Gln Thr Gly Ile Val Glu Gln
 645 650 655
 Cys Cys Thr Ser Ile Cys Ser Leu Tyr Gln Leu Glu Asn Tyr Cys Asn
 660 665 670

 <210> 354
 <211> 734
 <212> PRT
 <213> Homo sapiens

 <400> 354
 Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1 5 10 15
 Tyr Ser Arg Ser Leu Asp Lys Arg Thr Glu Glu Thr Ile Lys Phe Ala
 20 25 30
 Ala Ala His Tyr Asn Thr Glu Ile Leu Lys Ser Ile Asp Asn Glu Trp
 35 40 45
 Arg Lys Thr Gln Cys Met Pro Arg Glu Val Cys Ile Asp Val Gly Lys
 50 55 60
 Glu Phe Gly Val Ala Thr Asn Thr Phe Phe Lys Pro Pro Cys Val Ser
 65 70 75 80
 Val Tyr Arg Cys Gly Gly Cys Cys Asn Ser Glu Gly Leu Gln Cys Met
 85 90 95
 Asn Thr Ser Thr Ser Tyr Leu Ser Lys Thr Leu Phe Glu Ile Thr Val
 100 105 110
 Pro Leu Ser Gln Gly Pro Lys Pro Val Thr Ile Ser Phe Ala Asn His
 115 120 125
 Thr Ser Cys Arg Cys Met Ser Lys Leu Asp Val Tyr Arg Gln Val His
 130 135 140
 Ser Ile Ile Arg Arg Asp Ala His Lys Ser Glu Val Ala His Arg Phe
 145 150 155 160
 Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe
 165 170 175
 Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val
 180 185 190

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| Asn | Glu | Val | Thr | Glu | Phe | Ala | Lys | Thr | Cys | Val | Ala | Asp | Glu | Ser | Ala | | |
| | | 195 | | | | | 200 | | | | | 205 | | | | | |
| Glu | Asn | Cys | Asp | Lys | Ser | Leu | His | Thr | Leu | Phe | Gly | Asp | Lys | Leu | Cys | | |
| | 210 | | | | | 215 | | | | | 220 | | | | | | |
| Thr | Val | Ala | Thr | Leu | Arg | Glu | Thr | Tyr | Gly | Glu | Met | Ala | Asp | Cys | Cys | | |
| | 225 | | | | 230 | | | | | 235 | | | | | 240 | | |
| Ala | Lys | Gln | Glu | Pro | Glu | Arg | Asn | Glu | Cys | Phe | Leu | Gln | His | Lys | Asp | | |
| | | | | 245 | | | | | 250 | | | | | 255 | | | |
| Asp | Asn | Pro | Asn | Leu | Pro | Arg | Leu | Val | Arg | Pro | Glu | Val | Asp | Val | Met | | |
| | | | 260 | | | | | 265 | | | | | 270 | | | | |
| Cys | Thr | Ala | Phe | His | Asp | Asn | Glu | Glu | Thr | Phe | Leu | Lys | Lys | Tyr | Leu | | |
| | | 275 | | | | | 280 | | | | | 285 | | | | | |
| Tyr | Glu | Ile | Ala | Arg | Arg | His | Pro | Tyr | Phe | Tyr | Ala | Pro | Glu | Leu | Leu | | |
| | 290 | | | | | 295 | | | | | 300 | | | | | | |
| Phe | Phe | Ala | Lys | Arg | Tyr | Lys | Ala | Ala | Phe | Thr | Glu | Cys | Cys | Gln | Ala | | |
| | 305 | | | | 310 | | | | | 315 | | | | | 320 | | |
| Ala | Asp | Lys | Ala | Ala | Cys | Leu | Leu | Pro | Lys | Leu | Asp | Glu | Leu | Arg | Asp | | |
| | | | | 325 | | | | | 330 | | | | | 335 | | | |
| Glu | Gly | Lys | Ala | Ser | Ser | Ala | Lys | Gln | Arg | Leu | Lys | Cys | Ala | Ser | Leu | | |
| | | | 340 | | | | | 345 | | | | | 350 | | | | |
| Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe | Lys | Ala | Trp | Ala | Val | Ala | Arg | Leu | | |
| | | 355 | | | | | 360 | | | | | 365 | | | | | |
| Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu | Phe | Ala | Glu | Val | Ser | Lys | Leu | Val | | |
| | 370 | | | | | 375 | | | | | 380 | | | | | | |
| Thr | Asp | Leu | Thr | Lys | Val | His | Thr | Glu | Cys | Cys | His | Gly | Asp | Leu | Leu | | |
| | 385 | | | | 390 | | | | | 395 | | | | | 400 | | |
| Glu | Cys | Ala | Asp | Asp | Arg | Ala | Asp | Leu | Ala | Lys | Tyr | Ile | Cys | Glu | Asn | | |
| | | | | 405 | | | | | 410 | | | | | 415 | | | |
| Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu | Lys | Glu | Cys | Cys | Glu | Lys | Pro | Leu | | |
| | | | 420 | | | | | 425 | | | | | 430 | | | | |
| Leu | Glu | Lys | Ser | His | Cys | Ile | Ala | Glu | Val | Glu | Asn | Asp | Glu | Met | Pro | | |
| | | 435 | | | | | 440 | | | | | 445 | | | | | |
| Ala | Asp | Leu | Pro | Ser | Leu | Ala | Ala | Asp | Phe | Val | Glu | Ser | Lys | Asp | Val | | |
| | 450 | | | | | 455 | | | | | 460 | | | | | | |
| Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys | Asp | Val | Phe | Leu | Gly | Met | Phe | Leu | | |
| | 465 | | | | 470 | | | | | 475 | | | | | 480 | | |
| Tyr | Glu | Tyr | Ala | Arg | Arg | His | Pro | Asp | Tyr | Ser | Val | Val | Leu | Leu | Leu | | |
| | | | | 485 | | | | | 490 | | | | | 495 | | | |
| Arg | Leu | Ala | Lys | Thr | Tyr | Glu | Thr | Thr | Leu | Glu | Lys | Cys | Cys | Ala | Ala | | |
| | | | 500 | | | | | 505 | | | | | 510 | | | | |
| Ala | Asp | Pro | His | Glu | Cys | Tyr | Ala | Lys | Val | Phe | Asp | Glu | Phe | Lys | Pro | | |
| | | 515 | | | | | 520 | | | | | 525 | | | | | |

Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe
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 Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr
 545 550 555 560
 Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser
 565 570 575
 Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala
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 Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln
 595 600 605
 Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys
 610 615 620
 Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu
 625 630 635 640
 Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe
 645 650 655
 Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile
 660 665 670
 Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys Pro Lys Ala
 675 680 685
 Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val
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 <213> Homo sapiens

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 His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
 35 40 45
 Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
 50 55 60
 Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
 65 70 75 80
 Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp

| 85 | | | | | | | | | | 90 | | | | | 95 | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| Lys | Leu | Cys | Thr | Val | Ala | Thr | Leu | Arg | Glu | Thr | Tyr | Gly | Glu | Met | Ala | | | | |
| | | | 100 | | | | | 105 | | | | | 110 | | | | | | |
| Asp | Cys | Cys | Ala | Lys | Gln | Glu | Pro | Glu | Arg | Asn | Glu | Cys | Phe | Leu | Gln | | | | |
| | | 115 | | | | | 120 | | | | | 125 | | | | | | | |
| His | Lys | Asp | Asp | Asn | Pro | Asn | Leu | Pro | Arg | Leu | Val | Arg | Pro | Glu | Val | | | | |
| | | 130 | | | | 135 | | | | | 140 | | | | | | | | |
| Asp | Val | Met | Cys | Thr | Ala | Phe | His | Asp | Asn | Glu | Glu | Thr | Phe | Leu | Lys | | | | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | | | | |
| Lys | Tyr | Leu | Tyr | Glu | Ile | Ala | Arg | Arg | His | Pro | Tyr | Phe | Tyr | Ala | Pro | | | | |
| | | | | 165 | | | | | 170 | | | | | 175 | | | | | |
| Glu | Leu | Leu | Phe | Phe | Ala | Lys | Arg | Tyr | Lys | Ala | Ala | Phe | Thr | Glu | Cys | | | | |
| | | | 180 | | | | | 185 | | | | | 190 | | | | | | |
| Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala | Cys | Leu | Leu | Pro | Lys | Leu | Asp | Glu | | | | |
| | | 195 | | | | | 200 | | | | | 205 | | | | | | | |
| Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser | Ser | Ala | Lys | Gln | Arg | Leu | Lys | Cys | | | | |
| | 210 | | | | | 215 | | | | | 220 | | | | | | | | |
| Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe | Lys | Ala | Trp | Ala | Val | | | | |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 | | | | |
| Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu | Phe | Ala | Glu | Val | Ser | | | | |
| | | | | 245 | | | | | 250 | | | | | 255 | | | | | |
| Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | Val | His | Thr | Glu | Cys | Cys | His | Gly | | | | |
| | | | 260 | | | | | 265 | | | | | 270 | | | | | | |
| Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | Arg | Ala | Asp | Leu | Ala | Lys | Tyr | Ile | | | | |
| | | 275 | | | | | 280 | | | | | 285 | | | | | | | |
| Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu | Lys | Glu | Cys | Cys | Glu | | | | |
| | 290 | | | | | 295 | | | | | 300 | | | | | | | | |
| Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | Cys | Ile | Ala | Glu | Val | Glu | Asn | Asp | | | | |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 | | | | |
| Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | Leu | Ala | Ala | Asp | Phe | Val | Glu | Ser | | | | |
| | | | | 325 | | | | | 330 | | | | | 335 | | | | | |
| Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys | Asp | Val | Phe | Leu | Gly | | | | |
| | | | 340 | | | | | 345 | | | | | 350 | | | | | | |
| Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | Arg | His | Pro | Asp | Tyr | Ser | Val | Val | | | | |
| | | 355 | | | | | 360 | | | | | 365 | | | | | | | |
| Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | Tyr | Glu | Thr | Thr | Leu | Glu | Lys | Cys | | | | |
| | | 370 | | | | 375 | | | | | 380 | | | | | | | | |
| Cys | Ala | Ala | Ala | Asp | Pro | His | Glu | Cys | Tyr | Ala | Lys | Val | Phe | Asp | Glu | | | | |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 | | | | |
| Phe | Lys | Pro | Leu | Val | Glu | Glu | Pro | Gln | Asn | Leu | Ile | Lys | Gln | Asn | Cys | | | | |
| | | | | 405 | | | | | 410 | | | | | 415 | | | | | |
| Glu | Leu | Phe | Glu | Gln | Leu | Gly | Glu | Tyr | Lys | Phe | Gln | Asn | Ala | Leu | Leu | | | | |

| 420 | | | | | 425 | | | | | 430 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Arg | Tyr | Thr | Lys | Lys | Val | Pro | Gln | Val | Ser | Thr | Pro | Thr | Leu | Val |
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| Glu | Val | Ser | Arg | Asn | Leu | Gly | Lys | Val | Gly | Ser | Lys | Cys | Cys | Lys | His |
| | 450 | | | | | 455 | | | | | 460 | | | | |
| Pro | Glu | Ala | Lys | Arg | Met | Pro | Cys | Ala | Glu | Asp | Tyr | Leu | Ser | Val | Val |
| | 465 | | | | | 470 | | | | | 475 | | | | 480 |
| Leu | Asn | Gln | Leu | Cys | Val | Leu | His | Glu | Lys | Thr | Pro | Val | Ser | Asp | Arg |
| | | | | 485 | | | | | 490 | | | | | 495 | |
| Val | Thr | Lys | Cys | Cys | Thr | Glu | Ser | Leu | Val | Asn | Arg | Arg | Pro | Cys | Phe |
| | | | 500 | | | | | 505 | | | | | 510 | | |
| Ser | Ala | Leu | Glu | Val | Asp | Glu | Thr | Tyr | Val | Pro | Lys | Glu | Phe | Asn | Ala |
| | | 515 | | | | | 520 | | | | | 525 | | | |
| Glu | Thr | Phe | Thr | Phe | His | Ala | Asp | Ile | Cys | Thr | Leu | Ser | Glu | Lys | Glu |
| | 530 | | | | | 535 | | | | | 540 | | | | |
| Arg | Gln | Ile | Lys | Lys | Gln | Thr | Ala | Leu | Val | Glu | Leu | Val | Lys | His | Lys |
| | 545 | | | | | 550 | | | | | 555 | | | | 560 |
| Pro | Lys | Ala | Thr | Lys | Glu | Gln | Leu | Lys | Ala | Val | Met | Asp | Asp | Phe | Ala |
| | | | | 565 | | | | | 570 | | | | | 575 | |
| Ala | Phe | Val | Glu | Lys | Cys | Cys | Lys | Ala | Asp | Asp | Lys | Glu | Thr | Cys | Phe |
| | | | 580 | | | | | 585 | | | | | 590 | | |
| Ala | Glu | Glu | Gly | Lys | Lys | Leu | Val | Ala | Ala | Ser | Gln | Ala | Ala | Leu | Gly |
| | | 595 | | | | | 600 | | | | | 605 | | | |
| Leu | Thr | Glu | Glu | Thr | Ile | Lys | Phe | Ala | Ala | Ala | His | Tyr | Asn | Thr | Glu |
| | 610 | | | | | 615 | | | | | 620 | | | | |
| Ile | Leu | Lys | Ser | Ile | Asp | Asn | Glu | Trp | Arg | Lys | Thr | Gln | Cys | Met | Pro |
| | 625 | | | | | 630 | | | | | 635 | | | | 640 |
| Arg | Glu | Val | Cys | Ile | Asp | Val | Gly | Lys | Glu | Phe | Gly | Val | Ala | Thr | Asn |
| | | | | 645 | | | | | 650 | | | | | 655 | |
| Thr | Phe | Phe | Lys | Pro | Pro | Cys | Val | Ser | Val | Tyr | Arg | Cys | Gly | Gly | Cys |
| | | | 660 | | | | | 665 | | | | | 670 | | |
| Cys | Asn | Ser | Glu | Gly | Leu | Gln | Cys | Met | Asn | Thr | Ser | Thr | Ser | Tyr | Leu |
| | | 675 | | | | | 680 | | | | | 685 | | | |
| Ser | Lys | Thr | Leu | Phe | Glu | Ile | Thr | Val | Pro | Leu | Ser | Gln | Gly | Pro | Lys |
| | 690 | | | | | 695 | | | | | 700 | | | | |
| Pro | Val | Thr | Ile | Ser | Phe | Ala | Asn | His | Thr | Ser | Cys | Arg | Cys | Met | Ser |
| | 705 | | | | | 710 | | | | | 715 | | | | 720 |
| Lys | Leu | Asp | Val | Tyr | Arg | Gln | Val | His | Ser | Ile | Ile | Arg | Arg | | |
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 <212> PRT

<213> Homo sapiens

<400> 356

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Ser His Leu Val Glu Ala Leu Tyr Leu Val Cys Gly Glu Arg Gly Phe
      35           40           45

Phe Tyr Thr Pro Lys Thr Gly Tyr Gly Ser Ser Ser Arg Arg Ala Pro
      50           55           60

Gln Thr Gly Ile Val Glu Gln Cys Cys Thr Ser Ile Cys Ser Leu Tyr
      65           70           75           80

Gln Leu Glu Asn Tyr Cys Asn Asp Ala His Lys Ser Glu Val Ala His
      85           90           95

Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile
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Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys
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Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu
      130          135          140

Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp Lys
      145          150          155          160

Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp
      165          170          175

Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His
      180          185          190

Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp
      195          200          205

Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys
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Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu
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Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys
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Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu
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Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala
      275          280          285

Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala
      290          295          300

Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys
      305          310          315          320
```


Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly Asp
 325 330 335
 Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys
 340 345 350
 Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys
 355 360 365
 Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu
 370 375 380
 Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser Lys
 385 390 395 400
 Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly Met
 405 410 415
 Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu
 420 425 430
 Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys
 435 440 445
 Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe
 450 455 460
 Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu
 465 470 475 480
 Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val
 485 490 495
 Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu
 500 505 510
 Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro
 515 520 525
 Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val Leu
 530 535 540
 Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg Val
 545 550 555 560
 Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser
 565 570 575
 Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu
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 Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg
 595 600 605
 Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys Pro
 610 615 620
 Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala
 625 630 635 640
 Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala
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<213> Homo sapiens

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Arg Lys Thr Gln Cys Met Pro Arg Glu Val Cys Ile Asp Val Gly Lys
50 55 60
Glu Phe Gly Val Ala Thr Asn Thr Phe Phe Lys Pro Pro Cys Val Ser
65 70 75 80
Val Tyr Arg Cys Gly Gly Cys Cys Asn Ser Glu Gly Leu Gln Cys Met
85 90 95
Asn Thr Ser Thr Ser Tyr Leu Ser Lys Thr Leu Phe Glu Ile Thr Val
100 105 110
Pro Leu Ser Gln Gly Pro Lys Pro Val Thr Ile Ser Phe Ala Asn His
115 120 125
Thr Ser Cys Arg Cys Met Ser Lys Leu Asp Val Tyr Arg Gln Val His
130 135 140
Ser Ile Ile Arg Arg Asp Ala His Lys Ser Glu Val Ala His Arg Phe
145 150 155 160
Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe
165 170 175
Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val
180 185 190
Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala
195 200 205
Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys
210 215 220
Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys
225 230 235 240
Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp
245 250 255
Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met
260 265 270
Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu
275 280 285

Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu
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 Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala
 305 310 315 320
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 325 330 335
 Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu
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 Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu
 355 360 365
 Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val
 370 375 380
 Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu
 385 390 395 400
 Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn
 405 410 415
 Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu
 420 425 430
 Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro
 435 440 445
 Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val
 450 455 460
 Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu
 465 470 475 480
 Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu
 485 490 495
 Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala
 500 505 510
 Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro
 515 520 525
 Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe
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 Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr
 545 550 555 560
 Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser
 565 570 575
 Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala
 580 585 590
 Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln
 595 600 605
 Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys
 610 615 620

Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu
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 Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe
 645 650 655
 Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile
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 Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys Pro Lys Ala
 675 680 685
 Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val
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 Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly Leu
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<210> 358
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 <212> PRT
 <213> Homo sapiens

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 His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
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 Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
 50 55 60
 Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
 65 70 75 80
 Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
 85 90 95
 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
 100 105 110
 Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln
 115 120 125
 His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
 130 135 140
 Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys
 145 150 155 160
 Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro
 165 170 175
 Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys

| 180 | | | | | 185 | | | | | 190 | | | | | |
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| Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala | Cys | Leu | Leu | Pro | Lys | Leu | Asp | Glu |
| | 195 | | | | | | 200 | | | | | 205 | | | |
| Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser | Ser | Ala | Lys | Gln | Arg | Leu | Lys | Cys |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe | Lys | Ala | Trp | Ala | Val |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu | Phe | Ala | Glu | Val | Ser |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | Val | His | Thr | Glu | Cys | Cys | His | Gly |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | Arg | Ala | Asp | Leu | Ala | Lys | Tyr | Ile |
| | 275 | | | | | | 280 | | | | | 285 | | | |
| Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu | Lys | Glu | Cys | Cys | Glu |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | Cys | Ile | Ala | Glu | Val | Glu | Asn | Asp |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | Leu | Ala | Ala | Asp | Phe | Val | Glu | Ser |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys | Asp | Val | Phe | Leu | Gly |
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| Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | Arg | His | Pro | Asp | Tyr | Ser | Val | Val |
| | 355 | | | | | 360 | | | | | 365 | | | | |
| Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | Tyr | Glu | Thr | Thr | Leu | Glu | Lys | Cys |
| | 370 | | | | | 375 | | | | | 380 | | | | |
| Cys | Ala | Ala | Ala | Asp | Pro | His | Glu | Cys | Tyr | Ala | Lys | Val | Phe | Asp | Glu |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Phe | Lys | Pro | Leu | Val | Glu | Glu | Pro | Gln | Asn | Leu | Ile | Lys | Gln | Asn | Cys |
| | | | | 405 | | | | | 410 | | | | | 415 | |
| Glu | Leu | Phe | Glu | Gln | Leu | Gly | Glu | Tyr | Lys | Phe | Gln | Asn | Ala | Leu | Leu |
| | | | 420 | | | | 425 | | | | | | 430 | | |
| Val | Arg | Tyr | Thr | Lys | Lys | Val | Pro | Gln | Val | Ser | Thr | Pro | Thr | Leu | Val |
| | | 435 | | | | | 440 | | | | | 445 | | | |
| Glu | Val | Ser | Arg | Asn | Leu | Gly | Lys | Val | Gly | Ser | Lys | Cys | Cys | Lys | His |
| | 450 | | | | | 455 | | | | | 460 | | | | |
| Pro | Glu | Ala | Lys | Arg | Met | Pro | Cys | Ala | Glu | Asp | Tyr | Leu | Ser | Val | Val |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 |
| Leu | Asn | Gln | Leu | Cys | Val | Leu | His | Glu | Lys | Thr | Pro | Val | Ser | Asp | Arg |
| | | | | 485 | | | | | 490 | | | | | 495 | |
| Val | Thr | Lys | Cys | Cys | Thr | Glu | Ser | Leu | Val | Asn | Arg | Arg | Pro | Cys | Phe |
| | | | 500 | | | | | 505 | | | | | 510 | | |
| Ser | Ala | Leu | Glu | Val | Asp | Glu | Thr | Tyr | Val | Pro | Lys | Glu | Phe | Asn | Ala |

| | | | | |
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| Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu | | | | |
| 530 | | 535 | | 540 |
| Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys | | | | |
| 545 | | 550 | | 555 |
| Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala | | | | |
| | | 565 | | 570 |
| Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe | | | | |
| | | 580 | | 585 |
| Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly | | | | |
| | | 595 | | 600 |
| Leu Thr Glu Glu Thr Ile Lys Phe Ala Ala Ala His Tyr Asn Thr Glu | | | | |
| | | 610 | | 615 |
| Ile Leu Lys Ser Ile Asp Asn Glu Trp Arg Lys Thr Gln Cys Met Pro | | | | |
| 625 | | 630 | | 635 |
| Arg Glu Val Cys Ile Asp Val Gly Lys Glu Phe Gly Val Ala Thr Asn | | | | |
| | | 645 | | 650 |
| Thr Phe Phe Lys Pro Pro Cys Val Ser Val Tyr Arg Cys Gly Gly Cys | | | | |
| | | 660 | | 665 |
| Cys Asn Ser Glu Gly Leu Gln Cys Met Asn Thr Ser Thr Ser Tyr Leu | | | | |
| | | 675 | | 680 |
| Ser Lys Thr Leu Phe Glu Ile Thr Val Pro Leu Ser Gln Gly Pro Lys | | | | |
| | | 690 | | 695 |
| Pro Val Thr Ile Ser Phe Ala Asn His Thr Ser Cys Arg Cys Met Ser | | | | |
| 705 | | 710 | | 715 |
| Lys Leu Asp Val Tyr Arg Gln Val His Ser Ile Ile Arg Arg | | | | |
| | | 725 | | 730 |

<210> 359
 <211> 689
 <212> PRT
 <213> Homo sapiens

| |
|---|
| <400> 359 |
| Met Leu Ala Gly Ala Gly Arg Pro Gly Leu Pro Gln Gly Arg His Leu |
| 1 5 10 15 |
| Cys Trp Leu Leu Cys Ala Phe Thr Leu Lys Leu Cys Gln Ala Glu Ala |
| 20 25 30 |
| Pro Val Gln Glu Glu Lys Leu Ser Ala Ser Thr Ser Asn Leu Pro Cys |
| 35 40 45 |
| Trp Leu Val Glu Glu Phe Val Val Ala Glu Glu Cys Ser Pro Cys Ser |
| 50 55 60 |
| Asn Phe Arg Ala Lys Thr Thr Pro Glu Cys Gly Pro Thr Gly Tyr Val |
| 65 70 75 80 |

Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly
 420 425 430
 Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val
 435 440 445
 Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys
 450 455 460
 Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu
 465 470 475 480
 Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys
 485 490 495
 Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu
 500 505 510
 Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val
 515 520 525
 Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His
 530 535 540
 Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val
 545 550 555 560
 Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg
 565 570 575
 Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe
 580 585 590
 Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala
 595 600 605
 Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu
 610 615 620
 Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys
 625 630 635 640
 Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala
 645 650 655
 Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe
 660 665 670
 Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
 675 680 685

Leu

<210> 360
 <211> 667
 <212> PRT
 <213> Homo sapiens

<400> 360
 Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1 5 10 15

Tyr Ser Arg Gly Val Phe Arg Arg Asp Ala His Lys Ser Glu Val Ala
 20 25 30
 His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
 35 40 45
 Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
 50 55 60
 Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
 65 70 75 80
 Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
 85 90 95
 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
 100 105 110
 Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln
 115 120 125
 His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
 130 135 140
 Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys
 145 150 155 160
 Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro
 165 170 175
 Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys
 180 185 190
 Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu
 195 200 205
 Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys
 210 215 220
 Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val
 225 230 235 240
 Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser
 245 250 255
 Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly
 260 265 270
 Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile
 275 280 285
 Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu
 290 295 300
 Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp
 305 310 315 320
 Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser
 325 330 335
 Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly
 340 345 350

Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val
 355 360 365
 Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys
 370 375 380
 Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu
 385 390 395 400
 Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys
 405 410 415
 Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu
 420 425 430
 Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val
 435 440 445
 Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His
 450 455 460
 Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val
 465 470 475 480
 Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg
 485 490 495
 Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe
 500 505 510
 Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala
 515 520 525
 Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu
 530 535 540
 Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys
 545 550 555 560
 Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala
 565 570 575
 Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe
 580 585 590
 Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
 595 600 605
 Leu Phe Val Asn Gln His Leu Cys Gly Ser His Leu Val Glu Ala Leu
 610 615 620
 Tyr Leu Val Cys Gly Glu Arg Gly Phe Phe Tyr Thr Pro Lys Thr Gly
 625 630 635 640
 Gly Gly Pro Gly Lys Arg Gly Ile Val Glu Gln Cys Cys Thr Ser Ile
 645 650 655
 Cys Ser Leu Tyr Gln Leu Glu Asn Tyr Cys Asn
 660 665

<210> 361
 <211> 667
 <212> PRT
 <213> Homo sapiens

<400> 361
 Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1 5 10 15
 Tyr Ser Arg Ser Leu Asp Lys Arg Phe Val Asn Gln His Leu Cys Gly
 20 25 30
 Ser His Leu Val Glu Ala Leu Tyr Leu Val Cys Gly Glu Arg Gly Phe
 35 40 45
 Phe Tyr Thr Pro Lys Thr Gly Gly Gly Pro Gly Lys Arg Gly Ile Val
 50 55 60
 Glu Gln Cys Cys Thr Ser Ile Cys Ser Leu Tyr Gln Leu Glu Asn Tyr
 65 70 75 80
 Cys Asn Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu
 85 90 95
 Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr
 100 105 110
 Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val
 115 120 125
 Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys
 130 135 140
 Asp Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala
 145 150 155 160
 Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln
 165 170 175
 Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro
 180 185 190
 Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala
 195 200 205
 Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile
 210 215 220
 Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala
 225 230 235 240
 Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys
 245 250 255
 Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys
 260 265 270
 Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe
 275 280 285
 Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg
 290 295 300

Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu
305 310 315 320
Thr Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala
325 330 335
Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser
340 345 350
Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys
355 360 365
Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu
370 375 380
Pro Ser Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn
385 390 395 400
Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr
405 410 415
Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala
420 425 430
Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro
435 440 445
His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu
450 455 460
Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu
465 470 475 480
Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys
485 490 495
Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu
500 505 510
Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met
515 520 525
Pro Cys Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val
530 535 540
Leu His Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr
545 550 555 560
Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp
565 570 575
Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His
580 585 590
Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln
595 600 605
Thr Ala Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu
610 615 620
Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys
625 630 635 640

Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys
645 650 655

Leu Val Ala Ala Ser Gln Ala Ala Leu Gly Leu
660 665

<210> 362

<211> 731

<212> PRT

<213> Homo sapiens

<400> 362

Met Leu Ala Gly Ala Gly Arg Pro Gly Leu Pro Gln Gly Arg His Leu
1 5 10 15

Cys Trp Leu Leu Cys Ala Phe Thr Leu Lys Leu Cys Gln Ala Glu Ala
20 25 30

Pro Val Gln Glu Glu Lys Leu Ser Ala Ser Thr Ser Asn Leu Pro Cys
35 40 45

Trp Leu Val Glu Glu Phe Val Val Ala Glu Glu Cys Ser Pro Cys Ser
50 55 60

Asn Phe Arg Ala Lys Thr Thr Pro Glu Cys Gly Pro Thr Gly Tyr Val
65 70 75 80

Glu Lys Ile Thr Cys Ser Ser Ser Lys Arg Asn Glu Phe Lys Ser Cys
85 90 95

Arg Ser Ala Leu Met Glu Gln Arg Leu Phe Trp Lys Phe Glu Gly Ala
100 105 110

Val Val Cys Val Ala Leu Ile Phe Ala Cys Leu Val Ile Ile Arg Gln
115 120 125

Arg Gln Leu Asp Arg Lys Ala Leu Glu Lys Val Arg Lys Gln Ile Glu
130 135 140

Ser Ile Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu
145 150 155 160

Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr
165 170 175

Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val
180 185 190

Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys
195 200 205

Asp Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala
210 215 220

Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln
225 230 235 240

Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro
245 250 255

Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala
260 265 270

Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile
275 280 285
Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala
290 295 300
Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys
305 310 315 320
Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys
325 330 335
Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe
340 345 350
Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg
355 360 365
Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu
370 375 380
Thr Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala
385 390 395 400
Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser
405 410 415
Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys
420 425 430
Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu
435 440 445
Pro Ser Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn
450 455 460
Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr
465 470 475 480
Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala
485 490 495
Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro
500 505 510
His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu
515 520 525
Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu
530 535 540
Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys
545 550 555 560
Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu
565 570 575
Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met
580 585 590
Pro Cys Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val
595 600 605

Leu His Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr
 610 615 620
 Glu Ser Leu Val Asn Arg Pro Cys Phe Ser Ala Leu Glu Val Asp
 625 630 635 640
 Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His
 645 650 655
 Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln
 660 665 670
 Thr Ala Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu
 675 680 685
 Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys
 690 695 700
 Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys
 705 710 715 720
 Leu Val Ala Ala Ser Gln Ala Ala Leu Gly Leu
 725 730

<210> 363
 <211> 774
 <212> PRT
 <213> Homo sapiens

<400> 363
 Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1 5 10 15
 Tyr Ser Arg Ser Leu Asp Lys Arg Ala Pro Pro Arg Leu Ile Cys Asp
 20 25 30
 Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu Ala Glu Gln
 35 40 45
 Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu Gln Ile Thr
 50 55 60
 Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg Met Glu Val
 65 70 75 80
 Gly Gln Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu Leu Ser Glu
 85 90 95
 Ala Val Leu Arg Gly Gln Ala Leu Leu Val Gln Ser Ser Gln Pro Trp
 100 105 110
 Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly Leu Arg Ser
 115 120 125
 Leu Thr Thr Leu Leu Arg Ala Leu Arg Ala Gln Lys Glu Ala Ile Ser
 130 135 140
 Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile Thr Ala Asp
 145 150 155 160
 Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu Arg Gly Lys

| 165 | | | | | | | | | | 170 | | | | | 175 | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| Leu | Lys | Leu | Tyr | Thr | Gly | Glu | Ala | Cys | Arg | Thr | Gly | Asp | Asp | Ala | His | | | | |
| | | | 180 | | | | | 185 | | | | | 190 | | | | | | |
| Lys | Ser | Glu | Val | Ala | His | Arg | Phe | Lys | Asp | Leu | Gly | Glu | Glu | Asn | Phe | | | | |
| | | 195 | | | | | 200 | | | | | 205 | | | | | | | |
| Lys | Ala | Leu | Val | Leu | Ile | Ala | Phe | Ala | Gln | Tyr | Leu | Gln | Gln | Cys | Pro | | | | |
| | 210 | | | | | 215 | | | | | 220 | | | | | | | | |
| Phe | Glu | Asp | His | Val | Lys | Leu | Val | Asn | Glu | Val | Thr | Glu | Phe | Ala | Lys | | | | |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 | | | | |
| Thr | Cys | Val | Ala | Asp | Glu | Ser | Ala | Glu | Asn | Cys | Asp | Lys | Ser | Leu | His | | | | |
| | | | | 245 | | | | | 250 | | | | | 255 | | | | | |
| Thr | Leu | Phe | Gly | Asp | Lys | Leu | Cys | Thr | Val | Ala | Thr | Leu | Arg | Glu | Thr | | | | |
| | | | 260 | | | | | 265 | | | | | 270 | | | | | | |
| Tyr | Gly | Glu | Met | Ala | Asp | Cys | Cys | Ala | Lys | Gln | Glu | Pro | Glu | Arg | Asn | | | | |
| | 275 | | | | | | 280 | | | | | 285 | | | | | | | |
| Glu | Cys | Phe | Leu | Gln | His | Lys | Asp | Asp | Asn | Pro | Asn | Leu | Pro | Arg | Leu | | | | |
| | 290 | | | | | 295 | | | | | 300 | | | | | | | | |
| Val | Arg | Pro | Glu | Val | Asp | Val | Met | Cys | Thr | Ala | Phe | His | Asp | Asn | Glu | | | | |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 | | | | |
| Glu | Thr | Phe | Leu | Lys | Lys | Tyr | Leu | Tyr | Glu | Ile | Ala | Arg | Arg | His | Pro | | | | |
| | | | | 325 | | | | | 330 | | | | | 335 | | | | | |
| Tyr | Phe | Tyr | Ala | Pro | Glu | Leu | Leu | Phe | Phe | Ala | Lys | Arg | Tyr | Lys | Ala | | | | |
| | | | 340 | | | | | 345 | | | | | 350 | | | | | | |
| Ala | Phe | Thr | Glu | Cys | Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala | Cys | Leu | Leu | | | | |
| | | 355 | | | | | 360 | | | | | 365 | | | | | | | |
| Pro | Lys | Leu | Asp | Glu | Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser | Ser | Ala | Lys | | | | |
| | 370 | | | | | 375 | | | | | 380 | | | | | | | | |
| Gln | Arg | Leu | Lys | Cys | Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe | | | | |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 | | | | |
| Lys | Ala | Trp | Ala | Val | Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu | | | | |
| | | | | 405 | | | | | 410 | | | | | 415 | | | | | |
| Phe | Ala | Glu | Val | Ser | Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | Val | His | Thr | | | | |
| | | | 420 | | | | | 425 | | | | | 430 | | | | | | |
| Glu | Cys | Cys | His | Gly | Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | Arg | Ala | Asp | | | | |
| | | 435 | | | | | 440 | | | | | 445 | | | | | | | |
| Leu | Ala | Lys | Tyr | Ile | Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu | | | | |
| | 450 | | | | | 455 | | | | | 460 | | | | | | | | |
| Lys | Glu | Cys | Cys | Glu | Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | Cys | Ile | Ala | | | | |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 | | | | |
| Glu | Val | Glu | Asn | Asp | Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | Leu | Ala | Ala | | | | |
| | | | | 485 | | | | | 490 | | | | | 495 | | | | | |
| Asp | Phe | Val | Glu | Ser | Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys | | | | |

| 500 | | | | | 505 | | | | | 510 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asp | Val | Phe | Leu | Gly | Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | Arg | His | Pro |
| | 515 | | | | | | 520 | | | | | 525 | | | |
| Asp | Tyr | Ser | Val | Val | Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | Tyr | Glu | Thr |
| | 530 | | | | | 535 | | | | | 540 | | | | |
| Thr | Leu | Glu | Lys | Cys | Cys | Ala | Ala | Ala | Asp | Pro | His | Glu | Cys | Tyr | Ala |
| 545 | | | | | 550 | | | | | 555 | | | | | 560 |
| Lys | Val | Phe | Asp | Glu | Phe | Lys | Pro | Leu | Val | Glu | Glu | Pro | Gln | Asn | Leu |
| | | | | 565 | | | | | 570 | | | | | 575 | |
| Ile | Lys | Gln | Asn | Cys | Glu | Leu | Phe | Glu | Gln | Leu | Gly | Glu | Tyr | Lys | Phe |
| | | | 580 | | | | | 585 | | | | | 590 | | |
| Gln | Asn | Ala | Leu | Leu | Val | Arg | Tyr | Thr | Lys | Lys | Val | Pro | Gln | Val | Ser |
| | | 595 | | | | | 600 | | | | | 605 | | | |
| Thr | Pro | Thr | Leu | Val | Glu | Val | Ser | Arg | Asn | Leu | Gly | Lys | Val | Gly | Ser |
| | 610 | | | | | 615 | | | | | 620 | | | | |
| Lys | Cys | Cys | Lys | His | Pro | Glu | Ala | Lys | Arg | Met | Pro | Cys | Ala | Glu | Asp |
| 625 | | | | | 630 | | | | | 635 | | | | | 640 |
| Tyr | Leu | Ser | Val | Val | Leu | Asn | Gln | Leu | Cys | Val | Leu | His | Glu | Lys | Thr |
| | | | | 645 | | | | | 650 | | | | | 655 | |
| Pro | Val | Ser | Asp | Arg | Val | Thr | Lys | Cys | Cys | Thr | Glu | Ser | Leu | Val | Asn |
| | | | 660 | | | | | 665 | | | | | 670 | | |
| Arg | Arg | Pro | Cys | Phe | Ser | Ala | Leu | Glu | Val | Asp | Glu | Thr | Tyr | Val | Pro |
| | | 675 | | | | | 680 | | | | | 685 | | | |
| Lys | Glu | Phe | Asn | Ala | Glu | Thr | Phe | Thr | Phe | His | Ala | Asp | Ile | Cys | Thr |
| | 690 | | | | | 695 | | | | | 700 | | | | |
| Leu | Ser | Glu | Lys | Glu | Arg | Gln | Ile | Lys | Lys | Gln | Thr | Ala | Leu | Val | Glu |
| 705 | | | | | 710 | | | | | 715 | | | | | 720 |
| Leu | Val | Lys | His | Lys | Pro | Lys | Ala | Thr | Lys | Glu | Gln | Leu | Lys | Ala | Val |
| | | | | 725 | | | | | 730 | | | | | 735 | |
| Met | Asp | Asp | Phe | Ala | Ala | Phe | Val | Glu | Lys | Cys | Cys | Lys | Ala | Asp | Asp |
| | | | 740 | | | | 745 | | | | | | 750 | | |
| Lys | Glu | Thr | Cys | Phe | Ala | Glu | Glu | Gly | Lys | Lys | Leu | Val | Ala | Ala | Ser |
| | | 755 | | | | 760 | | | | | | 765 | | | |
| Gln | Ala | Ala | Leu | Gly | Leu | | | | | | | | | | |
| | 770 | | | | | | | | | | | | | | |

<210> 364

<211> 774

<212> PRT

<213> Homo sapiens

<400> 364

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Lys | Trp | Val | Ser | Phe | Ile | Ser | Leu | Leu | Phe | Leu | Phe | Ser | Ser | Ala |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| Tyr | Ser | Arg | Ser | Leu | Asp | Lys | Arg | Asp | Ala | His | Lys | Ser | Glu | Val | Ala | | |
| | | | 20 | | | | | 25 | | | | | 30 | | | | |
| His | Arg | Phe | Lys | Asp | Leu | Gly | Glu | Glu | Asn | Phe | Lys | Ala | Leu | Val | Leu | | |
| | | 35 | | | | | 40 | | | | | 45 | | | | | |
| Ile | Ala | Phe | Ala | Gln | Tyr | Leu | Gln | Gln | Cys | Pro | Phe | Glu | Asp | His | Val | | |
| | 50 | | | | | 55 | | | | | 60 | | | | | | |
| Lys | Leu | Val | Asn | Glu | Val | Thr | Glu | Phe | Ala | Lys | Thr | Cys | Val | Ala | Asp | | |
| | 65 | | | | 70 | | | | | 75 | | | | | 80 | | |
| Glu | Ser | Ala | Glu | Asn | Cys | Asp | Lys | Ser | Leu | His | Thr | Leu | Phe | Gly | Asp | | |
| | | | | 85 | | | | | 90 | | | | | 95 | | | |
| Lys | Leu | Cys | Thr | Val | Ala | Thr | Leu | Arg | Glu | Thr | Tyr | Gly | Glu | Met | Ala | | |
| | | | 100 | | | | | 105 | | | | | 110 | | | | |
| Asp | Cys | Cys | Ala | Lys | Gln | Glu | Pro | Glu | Arg | Asn | Glu | Cys | Phe | Leu | Gln | | |
| | | 115 | | | | | 120 | | | | | 125 | | | | | |
| His | Lys | Asp | Asp | Asn | Pro | Asn | Leu | Pro | Arg | Leu | Val | Arg | Pro | Glu | Val | | |
| | 130 | | | | | 135 | | | | | 140 | | | | | | |
| Asp | Val | Met | Cys | Thr | Ala | Phe | His | Asp | Asn | Glu | Glu | Thr | Phe | Leu | Lys | | |
| | 145 | | | | 150 | | | | | 155 | | | | | 160 | | |
| Lys | Tyr | Leu | Tyr | Glu | Ile | Ala | Arg | Arg | His | Pro | Tyr | Phe | Tyr | Ala | Pro | | |
| | | | | 165 | | | | | 170 | | | | | 175 | | | |
| Glu | Leu | Leu | Phe | Phe | Ala | Lys | Arg | Tyr | Lys | Ala | Ala | Phe | Thr | Glu | Cys | | |
| | | | 180 | | | | | 185 | | | | | 190 | | | | |
| Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala | Cys | Leu | Leu | Pro | Lys | Leu | Asp | Glu | | |
| | | 195 | | | | | 200 | | | | | 205 | | | | | |
| Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser | Ser | Ala | Lys | Gln | Arg | Leu | Lys | Cys | | |
| | 210 | | | | | 215 | | | | | 220 | | | | | | |
| Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe | Lys | Ala | Trp | Ala | Val | | |
| | 225 | | | | 230 | | | | | 235 | | | | 240 | | | |
| Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu | Phe | Ala | Glu | Val | Ser | | |
| | | | | 245 | | | | 250 | | | | | | 255 | | | |
| Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | Val | His | Thr | Glu | Cys | Cys | His | Gly | | |
| | | | 260 | | | | | 265 | | | | | 270 | | | | |
| Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | Arg | Ala | Asp | Leu | Ala | Lys | Tyr | Ile | | |
| | 275 | | | | | | 280 | | | | | 285 | | | | | |
| Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu | Lys | Glu | Cys | Cys | Glu | | |
| | 290 | | | | | 295 | | | | | 300 | | | | | | |
| Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | Cys | Ile | Ala | Glu | Val | Glu | Asn | Asp | | |
| | 305 | | | | 310 | | | | | 315 | | | | 320 | | | |
| Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | Leu | Ala | Ala | Asp | Phe | Val | Glu | Ser | | |
| | | | | 325 | | | | | 330 | | | | | 335 | | | |
| Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys | Asp | Val | Phe | Leu | Gly | | |
| | | | 340 | | | | | 345 | | | | | 350 | | | | |

Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val
 355 360 365
 Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys
 370 375 380
 Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu
 385 390 395 400
 Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys
 405 410 415
 Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu
 420 425 430
 Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val
 435 440 445
 Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His
 450 455 460
 Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val
 465 470 475 480
 Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg
 485 490 495
 Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe
 500 505 510
 Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala
 515 520 525
 Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu
 530 535 540
 Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys
 545 550 555 560
 Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala
 565 570 575
 Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe
 580 585 590
 Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
 595 600 605
 Leu Ala Pro Pro Arg Leu Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr
 610 615 620
 Leu Leu Glu Ala Lys Glu Ala Glu Gln Ile Thr Thr Gly Cys Ala Glu
 625 630 635 640
 His Cys Ser Leu Asn Glu Gln Ile Thr Val Pro Asp Thr Lys Val Asn
 645 650 655
 Phe Tyr Ala Trp Lys Arg Met Glu Val Gly Gln Gln Ala Val Glu Val
 660 665 670
 Trp Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu Arg Gly Gln Ala
 675 680 685

Leu Leu Val Gln Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu His Val
 690 695 700
 Asp Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala
 705 710 715 720
 Leu Arg Ala Gln Lys Glu Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala
 725 730 735
 Ala Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg
 740 745 750
 Val Tyr Ser Asn Phe Leu Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu
 755 760 765
 Ala Cys Arg Thr Gly Asp
 770

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 <211> 774
 <212> PRT
 <213> Homo sapiens

<400> 365
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 Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu Ala Glu Gln
 35 40 45
 Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu Gln Ile Thr
 50 55 60
 Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg Met Glu Val
 65 70 75 80
 Gly Gln Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu Leu Ser Glu
 85 90 95
 Ala Val Leu Arg Gly Gln Ala Leu Leu Val Gln Ser Ser Gln Pro Trp
 100 105 110
 Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly Leu Arg Ser
 115 120 125
 Leu Thr Thr Leu Leu Arg Ala Leu Arg Ala Gln Lys Glu Ala Ile Ser
 130 135 140
 Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile Thr Ala Asp
 145 150 155 160
 Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu Arg Gly Lys
 165 170 175
 Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp Asp Ala His
 180 185 190

Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe
 195 200 205
 Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro
 210 215 220
 Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys
 225 230 235 240
 Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His
 245 250 255
 Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr
 260 265 270
 Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn
 275 280 285
 Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu
 290 295 300
 Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu
 305 310 315 320
 Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro
 325 330 335
 Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala
 340 345 350
 Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu
 355 360 365
 Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys
 370 375 380
 Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe
 385 390 395 400
 Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu
 405 410 415
 Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr
 420 425 430
 Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp
 435 440 445
 Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu
 450 455 460
 Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala
 465 470 475 480
 Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala
 485 490 495
 Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys
 500 505 510
 Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro
 515 520 525

Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr
 530 535 540
 Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala
 545 550 555 560
 Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu
 565 570 575
 Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe
 580 585 590
 Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser
 595 600 605
 Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser
 610 615 620
 Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp
 625 630 635 640
 Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr
 645 650 655
 Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn
 660 665 670
 Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro
 675 680 685
 Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr
 690 695 700
 Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu
 705 710 715 720
 Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val
 725 730 735
 Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp
 740 745 750
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 755 760 765
 Gln Ala Ala Leu Gly Leu
 770

<210> 366
 <211> 774
 <212> PRT
 <213> Homo sapiens

<400> 366
 Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1 5 10 15
 Tyr Ser Arg Ser Leu Asp Lys Arg Asp Ala His Lys Ser Glu Val Ala
 20 25 30
 His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu

| 35 | | | | | 40 | | | | | 45 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Ala | Phe | Ala | Gln | Tyr | Leu | Gln | Gln | Cys | Pro | Phe | Glu | Asp | His | Val |
| 50 | | | | | | 55 | | | | | 60 | | | | |
| Lys | Leu | Val | Asn | Glu | Val | Thr | Glu | Phe | Ala | Lys | Thr | Cys | Val | Ala | Asp |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Glu | Ser | Ala | Glu | Asn | Cys | Asp | Lys | Ser | Leu | His | Thr | Leu | Phe | Gly | Asp |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Lys | Leu | Cys | Thr | Val | Ala | Thr | Leu | Arg | Glu | Thr | Tyr | Gly | Glu | Met | Ala |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Asp | Cys | Cys | Ala | Lys | Gln | Glu | Pro | Glu | Arg | Asn | Glu | Cys | Phe | Leu | Gln |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| His | Lys | Asp | Asp | Asn | Pro | Asn | Leu | Pro | Arg | Leu | Val | Arg | Pro | Glu | Val |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Asp | Val | Met | Cys | Thr | Ala | Phe | His | Asp | Asn | Glu | Glu | Thr | Phe | Leu | Lys |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Lys | Tyr | Leu | Tyr | Glu | Ile | Ala | Arg | Arg | His | Pro | Tyr | Phe | Tyr | Ala | Pro |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Glu | Leu | Leu | Phe | Phe | Ala | Lys | Arg | Tyr | Lys | Ala | Ala | Phe | Thr | Glu | Cys |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala | Cys | Leu | Leu | Pro | Lys | Leu | Asp | Glu |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser | Ser | Ala | Lys | Gln | Arg | Leu | Lys | Cys |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe | Lys | Ala | Trp | Ala | Val |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu | Phe | Ala | Glu | Val | Ser |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | Val | His | Thr | Glu | Cys | Cys | His | Gly |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | Arg | Ala | Asp | Leu | Ala | Lys | Tyr | Ile |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu | Lys | Glu | Cys | Cys | Glu |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | Cys | Ile | Ala | Glu | Val | Glu | Asn | Asp |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | Leu | Ala | Ala | Asp | Phe | Val | Glu | Ser |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys | Asp | Val | Phe | Leu | Gly |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | Arg | His | Pro | Asp | Tyr | Ser | Val | Val |
| | | 355 | | | | | 360 | | | | | 365 | | | |
| Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | Tyr | Glu | Thr | Thr | Leu | Glu | Lys | Cys |

| 370 | 375 | 380 |
|--|-----|-----|
| Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu 385 390 395 400 | | |
| Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys 405 410 415 | | |
| Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu 420 425 430 | | |
| Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val 435 440 445 | | |
| Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His 450 455 460 | | |
| Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val 465 470 475 480 | | |
| Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg 485 490 495 | | |
| Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe 500 505 510 | | |
| Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala 515 520 525 | | |
| Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu 530 535 540 | | |
| Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys 545 550 555 560 | | |
| Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala 565 570 575 | | |
| Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe 580 585 590 | | |
| Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly 595 600 605 | | |
| Leu Ala Pro Pro Arg Leu Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr 610 615 620 | | |
| Leu Leu Glu Ala Lys Glu Ala Glu Gln Ile Thr Thr Gly Cys Ala Glu 625 630 635 640 | | |
| His Cys Ser Leu Asn Glu Gln Ile Thr Val Pro Asp Thr Lys Val Asn 645 650 655 | | |
| Phe Tyr Ala Trp Lys Arg Met Glu Val Gly Gln Gln Ala Val Glu Val 660 665 670 | | |
| Trp Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu Arg Gly Gln Ala 675 680 685 | | |
| Leu Leu Val Gln Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu His Val 690 695 700 | | |
| Asp Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala | | |

705 710 715 720
 Leu Arg Ala Gln Lys Glu Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala
 725 730 735
 Ala Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg
 740 745 750
 Val Tyr Ser Asn Phe Leu Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu
 755 760 765
 Ala Cys Arg Thr Gly Asp
 770

<210> 367
 <211> 777
 <212> PRT
 <213> Homo sapiens

<400> 367
 Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
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 20 25 30
 Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu
 35 40 45
 Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu
 50 55 60
 Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg
 65 70 75 80
 Met Glu Val Gly Gln Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu
 85 90 95
 Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser
 100 105 110
 Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly
 115 120 125
 Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Gly Ala Gln Lys Glu
 130 135 140
 Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile
 145 150 155 160
 Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu
 165 170 175
 Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp
 180 185 190
 Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu
 195 200 205
 Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln
 210 215 220

Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu
 225 230 235 240
 Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys
 245 250 255
 Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu
 260 265 270
 Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro
 275 280 285
 Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu
 290 295 300
 Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His
 305 310 315 320
 Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg
 325 330 335
 Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg
 340 345 350
 Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala
 355 360 365
 Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser
 370 375 380
 Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu
 385 390 395 400
 Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro
 405 410 415
 Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys
 420 425 430
 Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp
 435 440 445
 Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser
 450 455 460
 Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His
 465 470 475 480
 Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser
 485 490 495
 Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala
 500 505 510
 Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg
 515 520 525
 Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr
 530 535 540
 Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu
 545 550 555 560

Asp Leu Ala Thr Cys Pro Arg Gly Phe Ala Val Thr Gly Cys Thr Cys
 65 70 75 80
 Gly Ser Ala Cys Gly Ser Trp Asp Val Arg Ala Glu Thr Thr Cys His
 85 90 95
 Cys Gln Cys Ala Gly Met Asp Trp Thr Gly Ala Arg Cys Cys Arg Val
 100 105 110
 Gln Pro Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu
 115 120 125
 Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr
 130 135 140
 Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val
 145 150 155 160
 Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys
 165 170 175
 Asp Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala
 180 185 190
 Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln
 195 200 205
 Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro
 210 215 220
 Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala
 225 230 235 240
 Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile
 245 250 255
 Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala
 260 265 270
 Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys
 275 280 285
 Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys
 290 295 300
 Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe
 305 310 315 320
 Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg
 325 330 335
 Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu
 340 345 350
 Thr Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala
 355 360 365
 Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser
 370 375 380
 Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys
 385 390 395 400

Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu
 405 410 415
 Pro Ser Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn
 420 425 430
 Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr
 435 440 445
 Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala
 450 455 460
 Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro
 465 470 475 480
 His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu
 485 490 495
 Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu
 500 505 510
 Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys
 515 520 525
 Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu
 530 535 540
 Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met
 545 550 555 560
 Pro Cys Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val
 565 570 575
 Leu His Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr
 580 585 590
 Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp
 595 600 605
 Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His
 610 615 620
 Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln
 625 630 635 640
 Thr Ala Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu
 645 650 655
 Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys
 660 665 670
 Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys
 675 680 685
 Leu Val Ala Ala Ser Gln Ala Ala Leu Gly Leu
 690 695

<210> 369
 <211> 699
 <212> PRT
 <213> Homo sapiens

<400> 369

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Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
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Tyr Ser Arg Gly Val Phe Arg Arg Asp Ala His Lys Ser Glu Val Ala
      20          25          30

His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
      35          40          45

Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
      50          55          60

Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
      65          70          75          80

Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
      85          90          95

Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
      100          105          110

Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln
      115          120          125

His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
      130          135          140

Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys
      145          150          155          160

Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro
      165          170          175

Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys
      180          185          190

Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu
      195          200          205

Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys
      210          215          220

Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val
      225          230          235          240

Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser
      245          250          255

Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly
      260          265          270

Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile
      275          280          285

Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu
      290          295          300

Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp
      305          310          315          320

Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser

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| 325 | | | | | | | | | | 330 | | | | | 335 | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys | Asp | Val | Phe | Leu | Gly | | | | |
| | | | 340 | | | | | 345 | | | | | 350 | | | | | | |
| Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | Arg | His | Pro | Asp | Tyr | Ser | Val | Val | | | | |
| | | 355 | | | | | 360 | | | | | 365 | | | | | | | |
| Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | Tyr | Glu | Thr | Thr | Leu | Glu | Lys | Cys | | | | |
| | | 370 | | | | 375 | | | | | 380 | | | | | | | | |
| Cys | Ala | Ala | Ala | Asp | Pro | His | Glu | Cys | Tyr | Ala | Lys | Val | Phe | Asp | Glu | | | | |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 | | | | |
| Phe | Lys | Pro | Leu | Val | Glu | Glu | Pro | Gln | Asn | Leu | Ile | Lys | Gln | Asn | Cys | | | | |
| | | | | 405 | | | | | 410 | | | | | 415 | | | | | |
| Glu | Leu | Phe | Glu | Gln | Leu | Gly | Glu | Tyr | Lys | Phe | Gln | Asn | Ala | Leu | Leu | | | | |
| | | | 420 | | | | | 425 | | | | | 430 | | | | | | |
| Val | Arg | Tyr | Thr | Lys | Lys | Val | Pro | Gln | Val | Ser | Thr | Pro | Thr | Leu | Val | | | | |
| | | 435 | | | | | 440 | | | | | 445 | | | | | | | |
| Glu | Val | Ser | Arg | Asn | Leu | Gly | Lys | Val | Gly | Ser | Lys | Cys | Cys | Lys | His | | | | |
| | 450 | | | | | 455 | | | | | 460 | | | | | | | | |
| Pro | Glu | Ala | Lys | Arg | Met | Pro | Cys | Ala | Glu | Asp | Tyr | Leu | Ser | Val | Val | | | | |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 | | | | |
| Leu | Asn | Gln | Leu | Cys | Val | Leu | His | Glu | Lys | Thr | Pro | Val | Ser | Asp | Arg | | | | |
| | | | | 485 | | | | | 490 | | | | | 495 | | | | | |
| Val | Thr | Lys | Cys | Cys | Thr | Glu | Ser | Leu | Val | Asn | Arg | Arg | Pro | Cys | Phe | | | | |
| | | | 500 | | | | | 505 | | | | | 510 | | | | | | |
| Ser | Ala | Leu | Glu | Val | Asp | Glu | Thr | Tyr | Val | Pro | Lys | Glu | Phe | Asn | Ala | | | | |
| | | 515 | | | | | 520 | | | | | 525 | | | | | | | |
| Glu | Thr | Phe | Thr | Phe | His | Ala | Asp | Ile | Cys | Thr | Leu | Ser | Glu | Lys | Glu | | | | |
| | 530 | | | | | 535 | | | | | 540 | | | | | | | | |
| Arg | Gln | Ile | Lys | Lys | Gln | Thr | Ala | Leu | Val | Glu | Leu | Val | Lys | His | Lys | | | | |
| 545 | | | | | 550 | | | | | 555 | | | | | 560 | | | | |
| Pro | Lys | Ala | Thr | Lys | Glu | Gln | Leu | Lys | Ala | Val | Met | Asp | Asp | Phe | Ala | | | | |
| | | | | 565 | | | | 570 | | | | | | 575 | | | | | |
| Ala | Phe | Val | Glu | Lys | Cys | Cys | Lys | Ala | Asp | Asp | Lys | Glu | Thr | Cys | Phe | | | | |
| | | | 580 | | | | | 585 | | | | | 590 | | | | | | |
| Ala | Glu | Glu | Gly | Lys | Lys | Leu | Val | Ala | Ala | Ser | Gln | Ala | Ala | Leu | Gly | | | | |
| | | 595 | | | | | 600 | | | | | 605 | | | | | | | |
| Leu | Lys | Thr | Leu | Cys | Ser | Met | Glu | Glu | Ala | Ile | Asn | Glu | Arg | Ile | Gln | | | | |
| | 610 | | | | | 615 | | | | | 620 | | | | | | | | |
| Glu | Val | Ala | Gly | Ser | Leu | Ile | Phe | Arg | Ala | Ile | Ser | Ser | Ile | Gly | Leu | | | | |
| 625 | | | | | 630 | | | | | 635 | | | | | 640 | | | | |
| Glu | Cys | Gln | Ser | Val | Thr | Ser | Arg | Gly | Asp | Leu | Ala | Thr | Cys | Pro | Arg | | | | |
| | | | | 645 | | | | | 650 | | | | | 655 | | | | | |
| Gly | Phe | Ala | Val | Thr | Gly | Cys | Thr | Cys | Gly | Ser | Ala | Cys | Gly | Ser | Trp | | | | |

660 665 670
 Asp Val Arg Ala Glu Thr Thr Cys His Cys Gln Cys Ala Gly Met Asp
 675 680 685
 Trp Thr Gly Ala Arg Cys Cys Arg Val Gln Pro
 690 695

<210> 370
 <211> 114
 <212> PRT
 <213> Homo sapiens

<400> 370
 Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1 5 10 15
 Tyr Ser Arg Ser Leu Asp Lys Arg Lys Thr Leu Cys Ser Met Glu Glu
 20 25 30
 Ala Ile Asn Glu Arg Ile Gln Glu Val Ala Gly Ser Leu Ile Phe Arg
 35 40 45
 Ala Ile Ser Ser Ile Gly Leu Glu Cys Gln Ser Val Thr Ser Arg Gly
 50 55 60
 Asp Leu Ala Thr Cys Pro Arg Gly Phe Ala Val Thr Gly Cys Thr Cys
 65 70 75 80
 Gly Ser Ala Cys Gly Ser Trp Asp Val Arg Ala Glu Thr Thr Cys His
 85 90 95
 Cys Gln Cys Ala Gly Met Asp Trp Thr Gly Ala Arg Cys Cys Arg Val
 100 105 110
 Gln Pro

<210> 371
 <211> 777
 <212> PRT
 <213> Homo sapiens

<400> 371
 Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
 1 5 10 15
 Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala Pro Pro Arg Leu
 20 25 30
 Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu
 35 40 45
 Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu
 50 55 60
 Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg
 65 70 75 80

Met Glu Val Gly Gln Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu
 85 90 95
 Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser
 100 105 110
 Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly
 115 120 125
 Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Gly Ala Gln Lys Glu
 130 135 140
 Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile
 145 150 155 160
 Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu
 165 170 175
 Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp
 180 185 190
 Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu
 195 200 205
 Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln
 210 215 220
 Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu
 225 230 235 240
 Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys
 245 250 255
 Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu
 260 265 270
 Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro
 275 280 285
 Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu
 290 295 300
 Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His
 305 310 315 320
 Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg
 325 330 335
 Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg
 340 345 350
 Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala
 355 360 365
 Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser
 370 375 380
 Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu
 385 390 395 400
 Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro
 405 410 415

Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys
 420 425 430
 Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp
 435 440 445
 Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser
 450 455 460
 Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His
 465 470 475 480
 Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser
 485 490 495
 Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala
 500 505 510
 Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg
 515 520 525
 Arg His Pro Asp Tyr Ser Val Leu Leu Leu Arg Leu Ala Lys Thr
 530 535 540
 Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu
 545 550 555 560
 Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro
 565 570 575
 Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu
 580 585 590
 Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro
 595 600 605
 Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys
 610 615 620
 Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys
 625 630 635 640
 Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His
 645 650 655
 Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser
 660 665 670
 Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr
 675 680 685
 Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp
 690 695 700
 Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala
 705 710 715 720
 Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu
 725 730 735
 Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys
 740 745 750

Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val
 755 760 765

Ala Ala Ser Gln Ala Ala Leu Gly Leu
 770 775

<210> 372
 <211> 693
 <212> PRT
 <213> Homo sapiens

<400> 372
 Met Lys Ala Leu Cys Leu Leu Leu Leu Pro Val Leu Gly Leu Leu Val
 1 5 10 15
 Ser Ser Lys Thr Leu Cys Ser Met Glu Glu Ala Ile Asn Glu Arg Ile
 20 25 30
 Gln Glu Val Ala Gly Ser Leu Ile Phe Arg Ala Ile Ser Ser Ile Gly
 35 40 45
 Leu Glu Cys Gln Ser Val Thr Ser Arg Gly Asp Leu Ala Thr Cys Pro
 50 55 60
 Arg Gly Phe Ala Val Thr Gly Cys Thr Cys Gly Ser Ala Cys Gly Ser
 65 70 75 80
 Trp Asp Val Arg Ala Glu Thr Thr Cys His Cys Gln Cys Ala Gly Met
 85 90 95
 Asp Trp Thr Gly Ala Arg Cys Cys Arg Val Gln Pro Asp Ala His Lys
 100 105 110
 Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys
 115 120 125
 Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe
 130 135 140
 Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr
 145 150 155 160
 Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr
 165 170 175
 Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr
 180 185 190
 Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu
 195 200 205
 Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val
 210 215 220
 Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu
 225 230 235 240
 Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr
 245 250 255
 Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala

| 260 | | | | | 265 | | | | | 270 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phe | Thr | Glu | Cys | Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala | Cys | Leu | Leu | Pro |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Lys | Leu | Asp | Glu | Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser | Ser | Ala | Lys | Gln |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Arg | Leu | Lys | Cys | Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe | Lys |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Ala | Trp | Ala | Val | Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu | Phe |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Ala | Glu | Val | Ser | Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | Val | His | Thr | Glu |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Cys | Cys | His | Gly | Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | Arg | Ala | Asp | Leu |
| | | 355 | | | | | 360 | | | | | 365 | | | |
| Ala | Lys | Tyr | Ile | Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu | Lys |
| | 370 | | | | | 375 | | | | | 380 | | | | |
| Glu | Cys | Cys | Glu | Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | Cys | Ile | Ala | Glu |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Val | Glu | Asn | Asp | Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | Leu | Ala | Ala | Asp |
| | | | | 405 | | | | | 410 | | | | | 415 | |
| Phe | Val | Glu | Ser | Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys | Asp |
| | | | 420 | | | | | 425 | | | | | 430 | | |
| Val | Phe | Leu | Gly | Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | Arg | His | Pro | Asp |
| | | 435 | | | | 440 | | | | | | 445 | | | |
| Tyr | Ser | Val | Val | Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | Tyr | Glu | Thr | Thr |
| | 450 | | | | | 455 | | | | | 460 | | | | |
| Leu | Glu | Lys | Cys | Cys | Ala | Ala | Ala | Asp | Pro | His | Glu | Cys | Tyr | Ala | Lys |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 |
| Val | Phe | Asp | Glu | Phe | Lys | Pro | Leu | Val | Glu | Glu | Pro | Gln | Asn | Leu | Ile |
| | | | | 485 | | | | | 490 | | | | | 495 | |
| Lys | Gln | Asn | Cys | Glu | Leu | Phe | Glu | Gln | Leu | Gly | Glu | Tyr | Lys | Phe | Gln |
| | | | 500 | | | | | 505 | | | | | 510 | | |
| Asn | Ala | Leu | Leu | Val | Arg | Tyr | Thr | Lys | Lys | Val | Pro | Gln | Val | Ser | Thr |
| | | 515 | | | | | 520 | | | | | 525 | | | |
| Pro | Thr | Leu | Val | Glu | Val | Ser | Arg | Asn | Leu | Gly | Lys | Val | Gly | Ser | Lys |
| | 530 | | | | | 535 | | | | | 540 | | | | |
| Cys | Cys | Lys | His | Pro | Glu | Ala | Lys | Arg | Met | Pro | Cys | Ala | Glu | Asp | Tyr |
| 545 | | | | | 550 | | | | | 555 | | | | | 560 |
| Leu | Ser | Val | Val | Leu | Asn | Gln | Leu | Cys | Val | Leu | His | Glu | Lys | Thr | Pro |
| | | | | 565 | | | | 570 | | | | | | 575 | |
| Val | Ser | Asp | Arg | Val | Thr | Lys | Cys | Cys | Thr | Glu | Ser | Leu | Val | Asn | Arg |
| | | | 580 | | | | | 585 | | | | | 590 | | |
| Arg | Pro | Cys | Phe | Ser | Ala | Leu | Glu | Val | Asp | Glu | Thr | Tyr | Val | Pro | Lys |

| | | | | |
|---|-----|-----|-----|-----|
| 595 | | 600 | | 605 |
| Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu | | | | |
| 610 | | 615 | | 620 |
| Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu | | | | |
| 625 | | 630 | | 635 |
| Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met | | | | |
| | 645 | | 650 | 655 |
| Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys | | | | |
| | 660 | | 665 | 670 |
| Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln | | | | |
| | 675 | | 680 | 685 |
| Ala Ala Leu Gly Leu | | | | |
| 690 | | | | |

<210> 373
 <211> 693
 <212> PRT
 <213> Homo sapiens

| |
|---|
| <400> 373 |
| Met Lys Ala Leu Cys Leu Leu Leu Leu Pro Val Leu Gly Leu Leu Val |
| 1 5 10 15 |
| Ser Ser Lys Thr Leu Cys Ser Met Glu Glu Ala Ile Asn Glu Arg Ile |
| 20 25 30 |
| Gln Glu Val Ala Gly Ser Leu Ile Phe Arg Ala Ile Ser Ser Ile Gly |
| 35 40 45 |
| Leu Glu Cys Gln Ser Val Thr Ser Arg Gly Asp Leu Ala Thr Cys Pro |
| 50 55 60 |
| Arg Gly Phe Ala Val Thr Gly Cys Thr Cys Gly Ser Ala Cys Gly Ser |
| 65 70 75 80 |
| Trp Asp Val Arg Ala Glu Thr Thr Cys His Cys Gln Cys Ala Gly Met |
| 85 90 95 |
| Asp Trp Thr Gly Ala Arg Cys Cys Arg Val Gln Pro Asp Ala His Lys |
| 100 105 110 |
| Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys |
| 115 120 125 |
| Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe |
| 130 135 140 |
| Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr |
| 145 150 155 160 |
| Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr |
| 165 170 175 |
| Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr |
| 180 185 190 |

Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu
 195 200 205
 Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val
 210 215 220
 Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu
 225 230 235 240
 Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr
 245 250 255
 Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala
 260 265 270
 Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro
 275 280 285
 Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln
 290 295 300
 Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys
 305 310 315 320
 Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe
 325 330 335
 Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu
 340 345 350
 Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu
 355 360 365
 Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys
 370 375 380
 Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu
 385 390 395 400
 Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp
 405 410 415
 Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp
 420 425 430
 Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp
 435 440 445
 Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr
 450 455 460
 Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys
 465 470 475 480
 Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile
 485 490 495
 Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln
 500 505 510
 Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr
 515 520 525

Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys
 530 535 540
 Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr
 545 550 555 560
 Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro
 565 570 575
 Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg
 580 585 590
 Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys
 595 600 605
 Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu
 610 615 620
 Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu
 625 630 635 640
 Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met
 645 650 655
 Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys
 660 665 670
 Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln
 675 680 685
 Ala Ala Leu Gly Leu
 690

<210> 374
 <211> 777
 <212> PRT
 <213> Homo sapiens

<400> 374
 Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
 1 5 10 15
 Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala Pro Pro Arg Leu
 20 25 30
 Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu
 35 40 45
 Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu
 50 55 60
 Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg
 65 70 75 80
 Met Glu Val Gly Gln Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu
 85 90 95
 Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser
 100 105 110

Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly
 115 120 125
 Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Gly Ala Gln Lys Glu
 130 135 140
 Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile
 145 150 155 160
 Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu
 165 170 175
 Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp
 180 185 190
 Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu
 195 200 205
 Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln
 210 215 220
 Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu
 225 230 235 240
 Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys
 245 250 255
 Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu
 260 265 270
 Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro
 275 280 285
 Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu
 290 295 300
 Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His
 305 310 315 320
 Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg
 325 330 335
 Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg
 340 345 350
 Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala
 355 360 365
 Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser
 370 375 380
 Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu
 385 390 395 400
 Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro
 405 410 415
 Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys
 420 425 430
 Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp
 435 440 445

Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser
 450 455 460
 Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His
 465 470 475 480
 Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser
 485 490 495
 Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala
 500 505 510
 Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg
 515 520 525
 Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr
 530 535 540
 Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu
 545 550 555 560
 Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro
 565 570 575
 Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu
 580 585 590
 Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro
 595 600 605
 Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys
 610 615 620
 Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys
 625 630 635 640
 Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His
 645 650 655
 Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser
 660 665 670
 Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr
 675 680 685
 Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp
 690 695 700
 Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala
 705 710 715 720
 Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu
 725 730 735
 Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys
 740 745 750
 Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val
 755 760 765
 Ala Ala Ser Gln Ala Ala Leu Gly Leu
 770 775

<210> 375
 <211> 777
 <212> PRT
 <213> Homo sapiens

<400> 375

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gly | Val | His | Glu | Cys | Pro | Ala | Trp | Leu | Trp | Leu | Leu | Leu | Ser | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Leu | Ser | Leu | Pro | Leu | Gly | Leu | Pro | Val | Leu | Gly | Ala | Pro | Pro | Arg | Leu |
| | | | 20 | | | | | 25 | | | | | | 30 | |
| Ile | Cys | Asp | Ser | Arg | Val | Leu | Glu | Arg | Tyr | Leu | Leu | Glu | Ala | Lys | Glu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ala | Glu | Asn | Ile | Thr | Thr | Gly | Cys | Ala | Glu | His | Cys | Ser | Leu | Asn | Glu |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Asn | Ile | Thr | Val | Pro | Asp | Thr | Lys | Val | Asn | Phe | Tyr | Ala | Trp | Lys | Arg |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Met | Glu | Val | Gly | Gln | Gln | Ala | Val | Glu | Val | Trp | Gln | Gly | Leu | Ala | Leu |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Leu | Ser | Glu | Ala | Val | Leu | Arg | Gly | Gln | Ala | Leu | Leu | Val | Asn | Ser | Ser |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Gln | Pro | Trp | Glu | Pro | Leu | Gln | Leu | His | Val | Asp | Lys | Ala | Val | Ser | Gly |
| | | | 115 | | | | 120 | | | | | 125 | | | |
| Leu | Arg | Ser | Leu | Thr | Thr | Leu | Leu | Arg | Ala | Leu | Gly | Ala | Gln | Lys | Glu |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Ala | Ile | Ser | Pro | Pro | Asp | Ala | Ala | Ser | Ala | Ala | Pro | Leu | Arg | Thr | Ile |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Thr | Ala | Asp | Thr | Phe | Arg | Lys | Leu | Phe | Arg | Val | Tyr | Ser | Asn | Phe | Leu |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Arg | Gly | Lys | Leu | Lys | Leu | Tyr | Thr | Gly | Glu | Ala | Cys | Arg | Thr | Gly | Asp |
| | | | 180 | | | | | 185 | | | | | | 190 | |
| Asp | Ala | His | Lys | Ser | Glu | Val | Ala | His | Arg | Phe | Lys | Asp | Leu | Gly | Glu |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Glu | Asn | Phe | Lys | Ala | Leu | Val | Leu | Ile | Ala | Phe | Ala | Gln | Tyr | Leu | Gln |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Gln | Cys | Pro | Phe | Glu | Asp | His | Val | Lys | Leu | Val | Asn | Glu | Val | Thr | Glu |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Phe | Ala | Lys | Thr | Cys | Val | Ala | Asp | Glu | Ser | Ala | Glu | Asn | Cys | Asp | Lys |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Ser | Leu | His | Thr | Leu | Phe | Gly | Asp | Lys | Leu | Cys | Thr | Val | Ala | Thr | Leu |
| | | | 260 | | | | | 265 | | | | | | 270 | |
| Arg | Glu | Thr | Tyr | Gly | Glu | Met | Ala | Asp | Cys | Cys | Ala | Lys | Gln | Glu | Pro |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Glu | Arg | Asn | Glu | Cys | Phe | Leu | Gln | His | Lys | Asp | Asp | Asn | Pro | Asn | Leu |

| | | | | | | | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 290 | | | | | 295 | | | | | 300 | | | | | |
| Pro 305 | Arg | Leu | Val | Arg | Pro 310 | Glu | Val | Asp | Val | Met 315 | Cys | Thr | Ala | Phe | His 320 |
| Asp | Asn | Glu | Glu | Thr 325 | Phe | Leu | Lys | Lys | Tyr 330 | Leu | Tyr | Glu | Ile | Ala 335 | Arg |
| Arg | His | Pro | Tyr 340 | Phe | Tyr | Ala | Pro | Glu 345 | Leu | Leu | Phe | Phe | Ala 350 | Lys | Arg |
| Tyr | Lys | Ala 355 | Ala | Phe | Thr | Glu | Cys 360 | Cys | Gln | Ala | Ala | Asp 365 | Lys | Ala | Ala |
| Cys | Leu 370 | Leu | Pro | Lys | Leu | Asp 375 | Glu | Leu | Arg | Asp | Glu 380 | Gly | Lys | Ala | Ser |
| Ser 385 | Ala | Lys | Gln | Arg | Leu 390 | Lys | Cys | Ala | Ser | Leu 395 | Gln | Lys | Phe | Gly | Glu 400 |
| Arg | Ala | Phe | Lys | Ala 405 | Trp | Ala | Val | Ala | Arg 410 | Leu | Ser | Gln | Arg | Phe 415 | Pro |
| Lys | Ala | Glu | Phe 420 | Ala | Glu | Val | Ser | Lys 425 | Leu | Val | Thr | Asp | Leu 430 | Thr | Lys |
| Val | His | Thr 435 | Glu | Cys | Cys | His | Gly 440 | Asp | Leu | Leu | Glu | Cys 445 | Ala | Asp | Asp |
| Arg | Ala 450 | Asp | Leu | Ala | Lys | Tyr 455 | Ile | Cys | Glu | Asn | Gln 460 | Asp | Ser | Ile | Ser |
| Ser 465 | Lys | Leu | Lys | Glu | Cys 470 | Cys | Glu | Lys | Pro | Leu 475 | Leu | Glu | Lys | Ser | His 480 |
| Cys | Ile | Ala | Glu | Val 485 | Glu | Asn | Asp | Glu | Met 490 | Pro | Ala | Asp | Leu | Pro 495 | Ser |
| Leu | Ala | Ala | Asp 500 | Phe | Val | Glu | Ser | Lys 505 | Asp | Val | Cys | Lys | Asn 510 | Tyr | Ala |
| Glu | Ala | Lys 515 | Asp | Val | Phe | Leu | Gly 520 | Met | Phe | Leu | Tyr | Glu 525 | Tyr | Ala | Arg |
| Arg | His 530 | Pro | Asp | Tyr | Ser | Val 535 | Val | Leu | Leu | Leu | Arg 540 | Leu | Ala | Lys | Thr |
| Tyr 545 | Glu | Thr | Thr | Leu | Glu 550 | Lys | Cys | Cys | Ala | Ala 555 | Ala | Asp | Pro | His | Glu 560 |
| Cys | Tyr | Ala | Lys | Val 565 | Phe | Asp | Glu | Phe | Lys 570 | Pro | Leu | Val | Glu | Glu 575 | Pro |
| Gln | Asn | Leu | Ile 580 | Lys | Gln | Asn | Cys | Glu 585 | Leu | Phe | Glu | Gln | Leu 590 | Gly | Glu |
| Tyr | Lys | Phe 595 | Gln | Asn | Ala | Leu | Leu 600 | Val | Arg | Tyr | Thr | Lys 605 | Lys | Val | Pro |
| Gln | Val 610 | Ser | Thr | Pro | Thr | Leu 615 | Val | Glu | Val | Ser | Arg 620 | Asn | Leu | Gly | Lys |
| Val | Gly | Ser | Lys | Cys | Cys | Lys | His | Pro | Glu | Ala | Lys | Arg | Met | Pro | Cys |

| | | | | | | |
|-------------------------|---|-----------------------------|-----|-----|--|-----|
| 625 | | 630 | | 635 | | 640 |
| Ala Glu Asp Tyr Leu | Ser Val Val Leu | Asn Gln Leu Cys Val Leu | His | | | |
| | 645 | 650 | 655 | | | |
| Glu Lys Thr Pro Val | Ser Asp Arg Val | Thr Lys Cys Cys Thr Glu Ser | | | | |
| | 660 | 665 | 670 | | | |
| Leu Val Asn Arg Arg Pro | Cys Phe Ser Ala Leu Glu | Val Asp Glu Thr | | | | |
| | 675 | 680 | 685 | | | |
| Tyr Val Pro Lys Glu Phe | Asn Ala Glu Thr Phe | Thr Phe His Ala Asp | | | | |
| | 690 | 695 | 700 | | | |
| Ile Cys Thr Leu Ser | Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala | | | | | |
| 705 | 710 | 715 | 720 | | | |
| Leu Val Glu Leu Val | Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu | | | | | |
| | 725 | 730 | 735 | | | |
| Lys Ala Val Met Asp Asp | Phe Ala Ala Phe Val Glu Lys Cys Cys Lys | | | | | |
| | 740 | 745 | 750 | | | |
| Ala Asp Asp Lys Glu Thr | Cys Phe Ala Glu Glu Gly Lys Lys Leu Val | | | | | |
| | 755 | 760 | 765 | | | |
| Ala Ala Ser Gln Ala Ala | Leu Gly Leu | | | | | |
| | 770 | 775 | | | | |

<210> 376
 <211> 689
 <212> PRT
 <213> Homo sapiens

| |
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| Cys Trp Leu Leu Cys Ala Phe Thr Leu Lys Leu Cys Gln Ala Glu Ala |
| 20 25 30 |
| Pro Val Gln Glu Glu Lys Leu Ser Ala Ser Thr Ser Asn Leu Pro Cys |
| 35 40 45 |
| Trp Leu Val Glu Glu Phe Val Val Ala Glu Glu Cys Ser Pro Cys Ser |
| 50 55 60 |
| Asn Phe Arg Ala Lys Thr Thr Pro Glu Cys Gly Pro Thr Gly Tyr Val |
| 65 70 75 80 |
| Glu Lys Ile Thr Cys Ser Ser Ser Lys Arg Asn Glu Phe Lys Ser Cys |
| 85 90 95 |
| Arg Ser Ala Leu Met Glu Gln Arg Asp Ala His Lys Ser Glu Val Ala |
| 100 105 110 |
| His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu |
| 115 120 125 |
| Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val |
| 130 135 140 |

Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
 145 150 155 160
 Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
 165 170 175
 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
 180 185 190
 Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln
 195 200 205
 His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
 210 215 220
 Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys
 225 230 235 240
 Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro
 245 250 255
 Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys
 260 265 270
 Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu
 275 280 285
 Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys
 290 295 300
 Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val
 305 310 315 320
 Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser
 325 330 335
 Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly
 340 345 350
 Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile
 355 360 365
 Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu
 370 375 380
 Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp
 385 390 395 400
 Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser
 405 410 415
 Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly
 420 425 430
 Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val
 435 440 445
 Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys
 450 455 460
 Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu
 465 470 475 480

Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys
485 490 495
Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu
500 505 510
Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val
515 520 525
Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His
530 535 540
Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val
545 550 555 560
Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg
565 570 575
Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe
580 585 590
Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala
595 600 605
Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu
610 615 620
Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys
625 630 635 640
Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala
645 650 655
Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe
660 665 670
Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
675 680 685
Leu

<210> 377
<211> 777
<212> PRT
<213> Homo sapiens

<400> 377
Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
1 5 10 15
Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala Pro Pro Arg Leu
20 25 30
Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu
35 40 45
Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu
50 55 60

| | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Ile | Thr | Val | Pro | Asp | Thr | Lys | Val | Asn | Phe | Tyr | Ala | Trp | Lys | Arg | 65 | 70 | 75 | 80 |
| Met | Glu | Val | Gly | Gln | Gln | Ala | Val | Glu | Val | Trp | Gln | Gly | Leu | Ala | Leu | 85 | 90 | 95 | |
| Leu | Ser | Glu | Ala | Val | Leu | Arg | Gly | Gln | Ala | Leu | Leu | Val | Asn | Ser | Ser | 100 | 105 | 110 | |
| Gln | Pro | Trp | Glu | Pro | Leu | Gln | Leu | His | Val | Asp | Lys | Ala | Val | Ser | Gly | 115 | 120 | 125 | |
| Leu | Arg | Ser | Leu | Thr | Thr | Leu | Leu | Arg | Ala | Leu | Gly | Ala | Gln | Lys | Glu | 130 | 135 | 140 | |
| Ala | Ile | Ser | Pro | Pro | Asp | Ala | Ala | Ser | Ala | Ala | Pro | Leu | Arg | Thr | Ile | 145 | 150 | 155 | 160 |
| Thr | Ala | Asp | Thr | Phe | Arg | Lys | Leu | Phe | Arg | Val | Tyr | Ser | Asn | Phe | Leu | 165 | 170 | 175 | |
| Arg | Gly | Lys | Leu | Lys | Leu | Tyr | Thr | Gly | Glu | Ala | Cys | Arg | Thr | Gly | Asp | 180 | 185 | 190 | |
| Asp | Ala | His | Lys | Ser | Glu | Val | Ala | His | Arg | Phe | Lys | Asp | Leu | Gly | Glu | 195 | 200 | 205 | |
| Glu | Asn | Phe | Lys | Ala | Leu | Val | Leu | Ile | Ala | Phe | Ala | Gln | Tyr | Leu | Gln | 210 | 215 | 220 | |
| Gln | Cys | Pro | Phe | Glu | Asp | His | Val | Lys | Leu | Val | Asn | Glu | Val | Thr | Glu | 225 | 230 | 235 | 240 |
| Phe | Ala | Lys | Thr | Cys | Val | Ala | Asp | Glu | Ser | Ala | Glu | Asn | Cys | Asp | Lys | 245 | 250 | 255 | |
| Ser | Leu | His | Thr | Leu | Phe | Gly | Asp | Lys | Leu | Cys | Thr | Val | Ala | Thr | Leu | 260 | 265 | 270 | |
| Arg | Glu | Thr | Tyr | Gly | Glu | Met | Ala | Asp | Cys | Cys | Ala | Lys | Gln | Glu | Pro | 275 | 280 | 285 | |
| Glu | Arg | Asn | Glu | Cys | Phe | Leu | Gln | His | Lys | Asp | Asp | Asn | Pro | Asn | Leu | 290 | 295 | 300 | |
| Pro | Arg | Leu | Val | Arg | Pro | Glu | Val | Asp | Val | Met | Cys | Thr | Ala | Phe | His | 305 | 310 | 315 | 320 |
| Asp | Asn | Glu | Glu | Thr | Phe | Leu | Lys | Lys | Tyr | Leu | Tyr | Glu | Ile | Ala | Arg | 325 | 330 | 335 | |
| Arg | His | Pro | Tyr | Phe | Tyr | Ala | Pro | Glu | Leu | Leu | Phe | Phe | Ala | Lys | Arg | 340 | 345 | 350 | |
| Tyr | Lys | Ala | Ala | Phe | Thr | Glu | Cys | Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala | 355 | 360 | 365 | |
| Cys | Leu | Leu | Pro | Lys | Leu | Asp | Glu | Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser | 370 | 375 | 380 | |
| Ser | Ala | Lys | Gln | Arg | Leu | Lys | Cys | Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | 385 | 390 | 395 | 400 |

Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro
 405 410 415
 Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys
 420 425 430
 Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp
 435 440 445
 Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser
 450 455 460
 Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His
 465 470 475 480
 Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser
 485 490 495
 Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala
 500 505 510
 Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg
 515 520 525
 Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr
 530 535 540
 Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu
 545 550 555 560
 Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro
 565 570 575
 Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu
 580 585 590
 Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro
 595 600 605
 Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys
 610 615 620
 Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys
 625 630 635 640
 Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His
 645 650 655
 Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser
 660 665 670
 Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr
 675 680 685
 Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp
 690 695 700
 Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala
 705 710 715 720
 Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu
 725 730 735

Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys
 740 745 750
 Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val
 755 760 765
 Ala Ala Ser Gln Ala Ala Leu Gly Leu
 770 775

<210> 378
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 <212> PRT
 <213> Homo sapiens

<400> 378
 Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Ser Leu
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 20 25 30
 Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu
 35 40 45
 Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu
 50 55 60
 Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg
 65 70 75 80
 Met Glu Val Gly Gln Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu
 85 90 95
 Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser
 100 105 110
 Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly
 115 120 125
 Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Gly Ala Gln Lys Glu
 130 135 140
 Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile
 145 150 155 160
 Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu
 165 170 175
 Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp
 180 185 190
 Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu
 195 200 205
 Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln
 210 215 220
 Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu
 225 230 235 240
 Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys

| 245 | | | | | | | | | | 250 | | | | | 255 | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| Ser | Leu | His | Thr | Leu | Phe | Gly | Asp | Lys | Leu | Cys | Thr | Val | Ala | Thr | Leu | | | | |
| | | | 260 | | | | | 265 | | | | | 270 | | | | | | |
| Arg | Glu | Thr | Tyr | Gly | Glu | Met | Ala | Asp | Cys | Cys | Ala | Lys | Gln | Glu | Pro | | | | |
| | | 275 | | | | | 280 | | | | | 285 | | | | | | | |
| Glu | Arg | Asn | Glu | Cys | Phe | Leu | Gln | His | Lys | Asp | Asp | Asn | Pro | Asn | Leu | | | | |
| | 290 | | | | | 295 | | | | | 300 | | | | | | | | |
| Pro | Arg | Leu | Val | Arg | Pro | Glu | Val | Asp | Val | Met | Cys | Thr | Ala | Phe | His | | | | |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 | | | | |
| Asp | Asn | Glu | Glu | Thr | Phe | Leu | Lys | Lys | Tyr | Leu | Tyr | Glu | Ile | Ala | Arg | | | | |
| | | | | 325 | | | | | 330 | | | | | 335 | | | | | |
| Arg | His | Pro | Tyr | Phe | Tyr | Ala | Pro | Glu | Leu | Leu | Phe | Phe | Ala | Lys | Arg | | | | |
| | | | 340 | | | | | 345 | | | | | 350 | | | | | | |
| Tyr | Lys | Ala | Ala | Phe | Thr | Glu | Cys | Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala | | | | |
| | 355 | | | | | | 360 | | | | | 365 | | | | | | | |
| Cys | Leu | Leu | Pro | Lys | Leu | Asp | Glu | Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser | | | | |
| | 370 | | | | | 375 | | | | | 380 | | | | | | | | |
| Ser | Ala | Lys | Gln | Arg | Leu | Lys | Cys | Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | | | | |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 | | | | |
| Arg | Ala | Phe | Lys | Ala | Trp | Ala | Val | Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | | | | |
| | | | | 405 | | | | | 410 | | | | | 415 | | | | | |
| Lys | Ala | Glu | Phe | Ala | Glu | Val | Ser | Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | | | | |
| | | | 420 | | | | | 425 | | | | | 430 | | | | | | |
| Val | His | Thr | Glu | Cys | Cys | His | Gly | Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | | | | |
| | 435 | | | | | | 440 | | | | | 445 | | | | | | | |
| Arg | Ala | Asp | Leu | Ala | Lys | Tyr | Ile | Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | | | | |
| | 450 | | | | | 455 | | | | | 460 | | | | | | | | |
| Ser | Lys | Leu | Lys | Glu | Cys | Cys | Glu | Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | | | | |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 | | | | |
| Cys | Ile | Ala | Glu | Val | Glu | Asn | Asp | Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | | | | |
| | | | | 485 | | | | | 490 | | | | | 495 | | | | | |
| Leu | Ala | Ala | Asp | Phe | Val | Glu | Ser | Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | | | | |
| | | | 500 | | | | | 505 | | | | | 510 | | | | | | |
| Glu | Ala | Lys | Asp | Val | Phe | Leu | Gly | Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | | | | |
| | 515 | | | | | | 520 | | | | | 525 | | | | | | | |
| Arg | His | Pro | Asp | Tyr | Ser | Val | Val | Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | | | | |
| | 530 | | | | | 535 | | | | | 540 | | | | | | | | |
| Tyr | Glu | Thr | Thr | Leu | Glu | Lys | Cys | Cys | Ala | Ala | Ala | Asp | Pro | His | Glu | | | | |
| 545 | | | | | 550 | | | | | 555 | | | | | 560 | | | | |
| Cys | Tyr | Ala | Lys | Val | Phe | Asp | Glu | Phe | Lys | Pro | Leu | Val | Glu | Glu | Pro | | | | |
| | | | | 565 | | | | | 570 | | | | | 575 | | | | | |
| Gln | Asn | Leu | Ile | Lys | Gln | Asn | Cys | Glu | Leu | Phe | Glu | Gln | Leu | Gly | Glu | | | | |

| | | |
|---|-----|-----|
| 580 | 585 | 590 |
| Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro | | |
| 595 | 600 | 605 |
| Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys | | |
| 610 | 615 | 620 |
| Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys | | |
| 625 | 630 | 635 |
| Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His | | |
| 645 | 650 | 655 |
| Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser | | |
| 660 | 665 | 670 |
| Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr | | |
| 675 | 680 | 685 |
| Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp | | |
| 690 | 695 | 700 |
| Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala | | |
| 705 | 710 | 715 |
| Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu | | |
| 725 | 730 | 735 |
| Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys | | |
| 740 | 745 | 750 |
| Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val | | |
| 755 | 760 | 765 |
| Ala Ala Ser Gln Ala Ala Leu Gly Leu | | |
| 770 | 775 | |

<210> 379
 <211> 1016
 <212> PRT
 <213> Homo sapiens

| |
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| Tyr Ser Arg Gly Val Phe Arg Arg Lys Pro Leu Gln Ser Trp Gly Arg |
| 20 25 30 |
| Gly Ser Ala Gly Gly Asn Ala His Ser Pro Leu Gly Val Pro Gly Gly |
| 35 40 45 |
| Gly Leu Pro Glu His Thr Phe Asn Leu Lys Met Phe Leu Glu Asn Val |
| 50 55 60 |
| Lys Val Asp Phe Leu Arg Ser Leu Asn Leu Ser Gly Val Pro Ser Gln |
| 65 70 75 80 |
| Asp Lys Thr Arg Val Glu Pro Pro Gln Tyr Met Ile Asp Leu Tyr Asn |
| 85 90 95 |

Arg Tyr Thr Ser Asp Lys Ser Thr Thr Pro Ala Ser Asn Ile Val Arg
 100 105 110
 Ser Phe Ser Met Glu Asp Ala Ile Ser Ile Thr Ala Thr Glu Asp Phe
 115 120 125
 Pro Phe Gln Lys His Ile Leu Leu Phe Asn Ile Ser Ile Pro Arg His
 130 135 140
 Glu Gln Ile Thr Arg Ala Glu Leu Arg Leu Tyr Val Ser Cys Gln Asn
 145 150 155 160
 His Val Asp Pro Ser His Asp Leu Lys Gly Ser Val Val Ile Tyr Asp
 165 170 175
 Val Leu Asp Gly Thr Asp Ala Trp Asp Ser Ala Thr Glu Thr Lys Thr
 180 185 190
 Phe Leu Val Ser Gln Asp Ile Gln Asp Glu Gly Trp Glu Thr Leu Glu
 195 200 205
 Val Ser Ser Ala Val Lys Arg Trp Val Arg Ser Asp Ser Thr Lys Ser
 210 215 220
 Lys Asn Lys Leu Glu Val Thr Val Glu Ser His Arg Lys Gly Cys Asp
 225 230 235 240
 Thr Leu Asp Ile Ser Val Pro Pro Gly Ser Arg Asn Leu Pro Phe Phe
 245 250 255
 Val Val Phe Ser Asn Asp His Ser Ser Gly Thr Lys Glu Thr Arg Leu
 260 265 270
 Glu Leu Arg Glu Met Ile Ser His Glu Gln Glu Ser Val Leu Lys Lys
 275 280 285
 Leu Ser Lys Asp Gly Ser Thr Glu Ala Gly Glu Ser Ser His Glu Glu
 290 295 300
 Asp Thr Asp Gly His Val Ala Ala Gly Ser Thr Leu Ala Arg Arg Lys
 305 310 315 320
 Arg Ser Ala Gly Ala Gly Ser His Cys Gln Lys Thr Ser Leu Arg Val
 325 330 335
 Asn Phe Glu Asp Ile Gly Trp Asp Ser Trp Ile Ile Ala Pro Lys Glu
 340 345 350
 Tyr Glu Ala Tyr Glu Cys Lys Gly Gly Cys Phe Phe Pro Leu Ala Asp
 355 360 365
 Asp Val Thr Pro Thr Lys His Ala Ile Val Gln Thr Leu Val His Leu
 370 375 380
 Lys Phe Pro Thr Lys Val Gly Lys Ala Cys Cys Val Pro Thr Lys Leu
 385 390 395 400
 Ser Pro Ile Ser Val Leu Tyr Lys Asp Asp Met Gly Val Pro Thr Leu
 405 410 415
 Lys Tyr His Tyr Glu Gly Met Ser Val Ala Glu Cys Gly Cys Arg Asp
 420 425 430

Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu
 435 440 445
 Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln
 450 455 460
 Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe
 465 470 475 480
 Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser
 485 490 495
 Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg
 500 505 510
 Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu
 515 520 525
 Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro
 530 535 540
 Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp
 545 550 555 560
 Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg
 565 570 575
 His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr
 580 585 590
 Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys
 595 600 605
 Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser
 610 615 620
 Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg
 625 630 635 640
 Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys
 645 650 655
 Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val
 660 665 670
 His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg
 675 680 685
 Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser
 690 695 700
 Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys
 705 710 715 720
 Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu
 725 730 735
 Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu
 740 745 750
 Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg
 755 760 765

His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr
 770 775 780
 Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys
 785 790 795 800
 Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln
 805 810 815
 Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr
 820 825 830
 Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln
 835 840 845
 Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val
 850 855 860
 Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala
 865 870 875 880
 Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu
 885 890 895
 Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu
 900 905 910
 Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr
 915 920 925
 Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile
 930 935 940
 Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu
 945 950 955 960
 Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys
 965 970 975
 Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala
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 Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala
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 1010 1015

<210> 380
 <211> 681
 <212> PRT
 <213> Homo sapiens

<400> 380
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 35 40 45
 Phe Thr Arg Gln Leu Ala Asn Glu Gly Cys Asp Ile Asn Ala Ile Ile
 50 55 60
 Phe His Thr Lys Lys Lys Leu Ser Val Cys Ala Asn Pro Lys Gln Thr
 65 70 75 80
 Trp Val Lys Tyr Ile Val Arg Leu Leu Ser Lys Lys Val Lys Asn Met
 85 90 95
 Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu
 100 105 110
 Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln
 115 120 125
 Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu
 130 135 140
 Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys
 145 150 155 160
 Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu
 165 170 175
 Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro
 180 185 190
 Gly Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu
 195 200 205
 Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His
 210 215 220
 Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg
 225 230 235 240
 Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg
 245 250 255
 Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala
 260 265 270
 Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser
 275 280 285
 Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu
 290 295 300
 Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro
 305 310 315 320
 Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys
 325 330 335
 Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp
 340 345 350
 Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser
 355 360 365

Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His
 370 375 380
 Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser
 385 390 395 400
 Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala
 405 410 415
 Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg
 420 425 430
 Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr
 435 440 445
 Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu
 450 455 460
 Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro
 465 470 475 480
 Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu
 485 490 495
 Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro
 500 505 510
 Glu Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys
 515 520 525
 Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys
 530 535 540
 Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His
 545 550 555 560
 Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser
 565 570 575
 Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr
 580 585 590
 Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp
 595 600 605
 Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala
 610 615 620
 Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu
 625 630 635 640
 Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys
 645 650 655
 Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val
 660 665 670
 Ala Ala Ser Gln Ala Ala Leu Gly Leu
 675 680

<210> 381

<211> 672
 <212> PRT
 <213> Homo sapiens

<400> 381

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Lys | Val | Ser | Val | Ala | Ala | Leu | Ser | Cys | Leu | Met | Leu | Val | Thr | Ala |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Leu | Gly | Ser | Gln | Ala | Asp | Cys | Cys | Leu | Gly | Tyr | Thr | Asp | Arg | Ile | Leu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| His | Pro | Lys | Phe | Ile | Val | Gly | Phe | Thr | Arg | Gln | Leu | Ala | Asn | Glu | Gly |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Cys | Asp | Ile | Asn | Ala | Ile | Ile | Phe | His | Thr | Lys | Lys | Lys | Leu | Ser | Val |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Cys | Ala | Asn | Pro | Lys | Gln | Thr | Trp | Val | Lys | Tyr | Ile | Val | Arg | Leu | Leu |
| | 65 | | | | 70 | | | | | 75 | | | | | 80 |
| Ser | Lys | Lys | Val | Lys | Asn | Met | Asp | Ala | His | Lys | Ser | Glu | Val | Ala | His |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Arg | Phe | Lys | Asp | Leu | Gly | Glu | Glu | Asn | Phe | Lys | Ala | Leu | Val | Leu | Ile |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Ala | Phe | Ala | Gln | Tyr | Leu | Gln | Gln | Cys | Pro | Phe | Glu | Asp | His | Val | Lys |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Leu | Val | Asn | Glu | Val | Thr | Glu | Phe | Ala | Lys | Thr | Cys | Val | Ala | Asp | Glu |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Ser | Ala | Glu | Asn | Cys | Asp | Lys | Ser | Leu | His | Thr | Leu | Phe | Gly | Asp | Lys |
| | 145 | | | | 150 | | | | | 155 | | | | | 160 |
| Leu | Cys | Thr | Val | Ala | Thr | Leu | Arg | Glu | Thr | Tyr | Gly | Glu | Met | Ala | Asp |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Cys | Cys | Ala | Lys | Gln | Glu | Pro | Glu | Arg | Asn | Glu | Cys | Phe | Leu | Gln | His |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Lys | Asp | Asp | Asn | Pro | Asn | Leu | Pro | Arg | Leu | Val | Arg | Pro | Glu | Val | Asp |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Val | Met | Cys | Thr | Ala | Phe | His | Asp | Asn | Glu | Glu | Thr | Phe | Leu | Lys | Lys |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Tyr | Leu | Tyr | Glu | Ile | Ala | Arg | Arg | His | Pro | Tyr | Phe | Tyr | Ala | Pro | Glu |
| | 225 | | | | 230 | | | | | 235 | | | | | 240 |
| Leu | Leu | Phe | Phe | Ala | Lys | Arg | Tyr | Lys | Ala | Ala | Phe | Thr | Glu | Cys | Cys |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Gln | Ala | Ala | Asp | Lys | Ala | Ala | Cys | Leu | Leu | Pro | Lys | Leu | Asp | Glu | Leu |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Arg | Asp | Glu | Gly | Lys | Ala | Ser | Ser | Ala | Lys | Gln | Arg | Leu | Lys | Cys | Ala |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe | Lys | Ala | Trp | Ala | Val | Ala |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu | Phe | Ala | Glu | Val | Ser | Lys |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Leu | Val | Thr | Asp | Leu | Thr | Lys | Val | His | Thr | Glu | Cys | Cys | His | Gly | Asp |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Leu | Leu | Glu | Cys | Ala | Asp | Asp | Arg | Ala | Asp | Leu | Ala | Lys | Tyr | Ile | Cys |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu | Lys | Glu | Cys | Cys | Glu | Lys |
| | 355 | | | | | | 360 | | | | | 365 | | | |
| Pro | Leu | Leu | Glu | Lys | Ser | His | Cys | Ile | Ala | Glu | Val | Glu | Asn | Asp | Glu |
| | 370 | | | | | 375 | | | | | 380 | | | | |
| Met | Pro | Ala | Asp | Leu | Pro | Ser | Leu | Ala | Ala | Asp | Phe | Val | Glu | Ser | Lys |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys | Asp | Val | Phe | Leu | Gly | Met |
| | | | | 405 | | | | | 410 | | | | | 415 | |
| Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | Arg | His | Pro | Asp | Tyr | Ser | Val | Val | Leu |
| | | | 420 | | | | | 425 | | | | | 430 | | |
| Leu | Leu | Arg | Leu | Ala | Lys | Thr | Tyr | Glu | Thr | Thr | Leu | Glu | Lys | Cys | Cys |
| | | 435 | | | | | 440 | | | | | 445 | | | |
| Ala | Ala | Ala | Asp | Pro | His | Glu | Cys | Tyr | Ala | Lys | Val | Phe | Asp | Glu | Phe |
| | 450 | | | | | 455 | | | | | 460 | | | | |
| Lys | Pro | Leu | Val | Glu | Glu | Pro | Gln | Asn | Leu | Ile | Lys | Gln | Asn | Cys | Glu |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 |
| Leu | Phe | Glu | Gln | Leu | Gly | Glu | Tyr | Lys | Phe | Gln | Asn | Ala | Leu | Leu | Val |
| | | | | 485 | | | | | 490 | | | | | 495 | |
| Arg | Tyr | Thr | Lys | Lys | Val | Pro | Gln | Val | Ser | Thr | Pro | Thr | Leu | Val | Glu |
| | | | 500 | | | | | 505 | | | | | 510 | | |
| Val | Ser | Arg | Asn | Leu | Gly | Lys | Val | Gly | Ser | Lys | Cys | Cys | Lys | His | Pro |
| | | 515 | | | | | 520 | | | | | 525 | | | |
| Glu | Ala | Lys | Arg | Met | Pro | Cys | Ala | Glu | Asp | Tyr | Leu | Ser | Val | Val | Leu |
| | 530 | | | | | 535 | | | | | 540 | | | | |
| Asn | Gln | Leu | Cys | Val | Leu | His | Glu | Lys | Thr | Pro | Val | Ser | Asp | Arg | Val |
| 545 | | | | | 550 | | | | | 555 | | | | | 560 |
| Thr | Lys | Cys | Cys | Thr | Glu | Ser | Leu | Val | Asn | Arg | Arg | Pro | Cys | Phe | Ser |
| | | | | 565 | | | | | 570 | | | | | 575 | |
| Ala | Leu | Glu | Val | Asp | Glu | Thr | Tyr | Val | Pro | Lys | Glu | Phe | Asn | Ala | Glu |
| | | | 580 | | | | | 585 | | | | | 590 | | |
| Thr | Phe | Thr | Phe | His | Ala | Asp | Ile | Cys | Thr | Leu | Ser | Glu | Lys | Glu | Arg |
| | | 595 | | | | | 600 | | | | | 605 | | | |
| Gln | Ile | Lys | Lys | Gln | Thr | Ala | Leu | Val | Glu | Leu | Val | Lys | His | Lys | Pro |
| | 610 | | | | | 615 | | | | | 620 | | | | |
| Lys | Ala | Thr | Lys | Glu | Gln | Leu | Lys | Ala | Val | Met | Asp | Asp | Phe | Ala | Ala |
| 625 | | | | | 630 | | | | | 635 | | | | | 640 |
| Phe | Val | Glu | Lys | Cys | Cys | Lys | Ala | Asp | Asp | Lys | Glu | Thr | Cys | Phe | Ala |

| | | |
|---|---------------------------------|-----|
| 645 | 650 | 655 |
| Glu Glu Gly Lys Lys Leu Val Ala | Ala Ser Gln Ala Ala Leu Gly Leu | |
| 660 | 665 | 670 |
| | | |
| <210> 382 | | |
| <211> 668 | | |
| <212> PRT | | |
| <213> Homo sapiens | | |
| | | |
| <400> 382 | | |
| Met Lys Val Ser Val Ala Ala Leu Ser Cys Leu Met Leu Val Thr Ala | | |
| 1 | 5 | 10 |
| | | |
| Leu Gly Ser Gln Ala Gly Tyr Thr Asp Arg Ile Leu His Pro Lys Phe | | |
| 20 | 25 | 30 |
| | | |
| Ile Val Gly Phe Thr Arg Gln Leu Ala Asn Glu Gly Cys Asp Ile Asn | | |
| 35 | 40 | 45 |
| | | |
| Ala Ile Ile Phe His Thr Lys Lys Lys Leu Ser Val Cys Ala Asn Pro | | |
| 50 | 55 | 60 |
| | | |
| Lys Gln Thr Trp Val Lys Tyr Ile Val Arg Leu Leu Ser Lys Lys Val | | |
| 65 | 70 | 75 |
| | | |
| Lys Asn Met Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp | | |
| 85 | 90 | 95 |
| | | |
| Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln | | |
| 100 | 105 | 110 |
| | | |
| Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu | | |
| 115 | 120 | 125 |
| | | |
| Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn | | |
| 130 | 135 | 140 |
| | | |
| Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val | | |
| 145 | 150 | 155 |
| | | |
| Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys | | |
| 165 | 170 | 175 |
| | | |
| Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn | | |
| 180 | 185 | 190 |
| | | |
| Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr | | |
| 195 | 200 | 205 |
| | | |
| Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu | | |
| 210 | 215 | 220 |
| | | |
| Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe | | |
| 225 | 230 | 235 |
| | | |
| Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp | | |
| 245 | 250 | 255 |
| | | |
| Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly | | |
| 260 | 265 | 270 |

Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys
 275 280 285
 Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln
 290 295 300
 Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp
 305 310 315 320
 Leu Thr Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys
 325 330 335
 Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp
 340 345 350
 Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu
 355 360 365
 Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp
 370 375 380
 Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys
 385 390 395 400
 Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu
 405 410 415
 Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu
 420 425 430
 Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp
 435 440 445
 Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val
 450 455 460
 Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln
 465 470 475 480
 Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys
 485 490 495
 Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn
 500 505 510
 Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg
 515 520 525
 Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys
 530 535 540
 Val Leu His Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys
 545 550 555 560
 Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val
 565 570 575
 Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe
 580 585 590
 His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys
 595 600 605

Gln Thr Ala Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys
610 615 620

Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys
625 630 635 640

Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys
645 650 655

Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly Leu
660 665

<210> 383
<211> 655
<212> PRT
<213> Homo sapiens

<400> 383
Met Lys Val Ser Val Ala Ala Leu Ser Cys Leu Met Leu Val Thr Ala
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Leu Gly Ser Gln Ala Gly Phe Thr Arg Gln Leu Ala Asn Glu Gly Cys
20 25 30

Asp Ile Asn Ala Ile Ile Phe His Thr Lys Lys Lys Leu Ser Val Cys
35 40 45

Ala Asn Pro Lys Gln Thr Trp Val Lys Tyr Ile Val Arg Leu Leu Ser
50 55 60

Lys Lys Val Lys Asn Met Asp Ala His Lys Ser Glu Val Ala His Arg
65 70 75 80

Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala
85 90 95

Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu
100 105 110

Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser
115 120 125

Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu
130 135 140

Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys
145 150 155 160

Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys
165 170 175

Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val
180 185 190

Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr
195 200 205

Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu
210 215 220

Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln

| | | | | | | |
|---------------------|---------------------|-----------------------------|-----|-----|-----|-----|
| 225 | | 230 | | 235 | | 240 |
| Ala Ala Asp Lys Ala | Ala Cys Leu Leu Pro | Lys Leu Asp Glu Leu Arg | | | | |
| | 245 | | 250 | | 255 | |
| Asp Glu Gly Lys Ala | Ser Ser Ala Lys | Gln Arg Leu Lys Cys Ala Ser | | | | |
| | 260 | 265 | | 270 | | |
| Leu Gln Lys Phe Gly | Glu Arg Ala Phe Lys | Ala Trp Ala Val Ala Arg | | | | |
| | 275 | 280 | 285 | | | |
| Leu Ser Gln Arg Phe | Pro Lys Ala Glu Phe | Ala Glu Val Ser Lys Leu | | | | |
| | 290 | 295 | 300 | | | |
| Val Thr Asp Leu Thr | Lys Val His Thr | Glu Cys Cys His Gly Asp Leu | | | | |
| 305 | 310 | 315 | | 320 | | |
| Leu Glu Cys Ala Asp | Asp Arg Ala Asp | Leu Ala Lys Tyr Ile Cys Glu | | | | |
| | 325 | 330 | | 335 | | |
| Asn Gln Asp Ser Ile | Ser Ser Lys Leu Lys | Glu Cys Cys Glu Lys Pro | | | | |
| | 340 | 345 | 350 | | | |
| Leu Leu Glu Lys Ser | His Cys Ile Ala | Glu Val Glu Asn Asp Glu Met | | | | |
| | 355 | 360 | 365 | | | |
| Pro Ala Asp Leu Pro | Ser Leu Ala Ala | Asp Phe Val Glu Ser Lys Asp | | | | |
| | 370 | 375 | 380 | | | |
| Val Cys Lys Asn Tyr | Ala Glu Ala Lys | Asp Val Phe Leu Gly Met Phe | | | | |
| 385 | 390 | 395 | | 400 | | |
| Leu Tyr Glu Tyr Ala | Arg Arg His Pro | Asp Tyr Ser Val Val Leu Leu | | | | |
| | 405 | 410 | 415 | | | |
| Leu Arg Leu Ala Lys | Thr Tyr Glu Thr | Thr Leu Glu Lys Cys Cys Ala | | | | |
| | 420 | 425 | 430 | | | |
| Ala Ala Asp Pro His | Glu Cys Tyr Ala | Lys Val Phe Asp Glu Phe Lys | | | | |
| | 435 | 440 | 445 | | | |
| Pro Leu Val Glu Glu | Pro Gln Asn Leu | Ile Lys Gln Asn Cys Glu Leu | | | | |
| | 450 | 455 | 460 | | | |
| Phe Glu Gln Leu Gly | Glu Tyr Lys Phe | Gln Asn Ala Leu Leu Val Arg | | | | |
| 465 | 470 | 475 | | 480 | | |
| Tyr Thr Lys Lys Val | Pro Gln Val Ser | Thr Pro Thr Leu Val Glu Val | | | | |
| | 485 | 490 | 495 | | | |
| Ser Arg Asn Leu Gly | Lys Val Gly Ser | Lys Cys Cys Lys His Pro Glu | | | | |
| | 500 | 505 | 510 | | | |
| Ala Lys Arg Met Pro | Cys Ala Glu Asp | Tyr Leu Ser Val Val Leu Asn | | | | |
| | 515 | 520 | 525 | | | |
| Gln Leu Cys Val Leu | His Glu Lys Thr | Pro Val Ser Asp Arg Val Thr | | | | |
| | 530 | 535 | 540 | | | |
| Lys Cys Cys Thr Glu | Ser Leu Val Asn | Arg Arg Pro Cys Phe Ser Ala | | | | |
| 545 | 550 | 555 | | 560 | | |
| Leu Glu Val Asp Glu | Thr Tyr Val Pro | Lys Glu Phe Asn Ala Glu Thr | | | | |

| 195 | | | | | 200 | | | | | 205 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Leu | Leu | Phe | Phe | Ala | Lys | Arg | Tyr | Lys | Ala | Ala | Phe | Thr | Glu | Cys |
| 210 | | | | | | 215 | | | | | 220 | | | | |
| Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala | Cys | Leu | Leu | Pro | Lys | Leu | Asp | Glu |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser | Ser | Ala | Lys | Gln | Arg | Leu | Lys | Cys |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe | Lys | Ala | Trp | Ala | Val |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu | Phe | Ala | Glu | Val | Ser |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | Val | His | Thr | Glu | Cys | Cys | His | Gly |
| 290 | | | | | | 295 | | | | | 300 | | | | |
| Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | Arg | Ala | Asp | Leu | Ala | Lys | Tyr | Ile |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu | Lys | Glu | Cys | Cys | Glu |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | Cys | Ile | Ala | Glu | Val | Glu | Asn | Asp |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | Leu | Ala | Ala | Asp | Phe | Val | Glu | Ser |
| | | 355 | | | | | 360 | | | | | 365 | | | |
| Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys | Asp | Val | Phe | Leu | Gly |
| | 370 | | | | | 375 | | | | | 380 | | | | |
| Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | Arg | His | Pro | Asp | Tyr | Ser | Val | Val |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | Tyr | Glu | Thr | Thr | Leu | Glu | Lys | Cys |
| | | | | 405 | | | | | 410 | | | | | 415 | |
| Cys | Ala | Ala | Ala | Asp | Pro | His | Glu | Cys | Tyr | Ala | Lys | Val | Phe | Asp | Glu |
| | | | 420 | | | | | 425 | | | | | 430 | | |
| Phe | Lys | Pro | Leu | Val | Glu | Glu | Pro | Gln | Asn | Leu | Ile | Lys | Gln | Asn | Cys |
| | | 435 | | | | | 440 | | | | | 445 | | | |
| Glu | Leu | Phe | Glu | Gln | Leu | Gly | Glu | Tyr | Lys | Phe | Gln | Asn | Ala | Leu | Leu |
| | 450 | | | | | 455 | | | | | 460 | | | | |
| Val | Arg | Tyr | Thr | Lys | Lys | Val | Pro | Gln | Val | Ser | Thr | Pro | Thr | Leu | Val |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 |
| Glu | Val | Ser | Arg | Asn | Leu | Gly | Lys | Val | Gly | Ser | Lys | Cys | Cys | Lys | His |
| | | | | 485 | | | | | 490 | | | | | 495 | |
| Pro | Glu | Ala | Lys | Arg | Met | Pro | Cys | Ala | Glu | Asp | Tyr | Leu | Ser | Val | Val |
| | | 500 | | | | | | 505 | | | | | 510 | | |
| Leu | Asn | Gln | Leu | Cys | Val | Leu | His | Glu | Lys | Thr | Pro | Val | Ser | Asp | Arg |
| | | 515 | | | | | 520 | | | | | 525 | | | |
| Val | Thr | Lys | Cys | Cys | Thr | Glu | Ser | Leu | Val | Asn | Arg | Arg | Pro | Cys | Phe |

| | | |
|---------------------|-----------------------------|-------------------------|
| 530 | 535 | 540 |
| Ser Ala Leu Glu Val | Asp Glu Thr Tyr Val | Pro Lys Glu Phe Asn Ala |
| 545 | 550 | 555 |
| Glu Thr Phe Thr | Phe His Ala Asp Ile Cys Thr | Leu Ser Glu Lys Glu |
| | 565 | 570 |
| Arg Gln Ile | Lys Lys Gln Thr Ala Leu Val | Glu Leu Val Lys His Lys |
| | 580 | 585 |
| Pro Lys Ala Thr | Lys Glu Gln Leu Lys Ala Val | Met Asp Asp Phe Ala |
| | 595 | 600 |
| Ala Phe Val Glu Lys | Cys Cys Lys Ala Asp Asp | Lys Glu Thr Cys Phe |
| | 610 | 615 |
| Ala Glu Glu Gly Lys | Lys Leu Val Ala Ala | Ser Gln Ala Ala Leu Gly |
| | 625 | 630 |
| | | 635 |
| | | 640 |

Leu

<210> 385
 <211> 1016
 <212> PRT
 <213> Homo sapiens

| |
|---|
| <400> 385 |
| Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala |
| 1 5 10 15 |
| Tyr Ser Arg Gly Val Phe Arg Arg Asp Ala His Lys Ser Glu Val Ala |
| 20 25 30 |
| His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu |
| 35 40 45 |
| Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val |
| 50 55 60 |
| Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp |
| 65 70 75 80 |
| Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp |
| 85 90 95 |
| Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala |
| 100 105 110 |
| Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln |
| 115 120 125 |
| His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val |
| 130 135 140 |
| Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys |
| 145 150 155 160 |
| Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro |
| 165 170 175 |
| Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys |

| 180 | | | | | 185 | | | | | 190 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala | Cys | Leu | Leu | Pro | Lys | Leu | Asp | Glu |
| | 195 | | | | | | 200 | | | | | 205 | | | |
| Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser | Ser | Ala | Lys | Gln | Arg | Leu | Lys | Cys |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe | Lys | Ala | Trp | Ala | Val |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu | Phe | Ala | Glu | Val | Ser |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | Val | His | Thr | Glu | Cys | Cys | His | Gly |
| | | | 260 | | | | | 265 | | | | | | 270 | |
| Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | Arg | Ala | Asp | Leu | Ala | Lys | Tyr | Ile |
| | 275 | | | | | | 280 | | | | | 285 | | | |
| Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu | Lys | Glu | Cys | Cys | Glu |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | Cys | Ile | Ala | Glu | Val | Glu | Asn | Asp |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | Leu | Ala | Ala | Asp | Phe | Val | Glu | Ser |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys | Asp | Val | Phe | Leu | Gly |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | Arg | His | Pro | Asp | Tyr | Ser | Val | Val |
| | 355 | | | | | 360 | | | | | 365 | | | | |
| Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | Tyr | Glu | Thr | Thr | Leu | Glu | Lys | Cys |
| | 370 | | | | | 375 | | | | | 380 | | | | |
| Cys | Ala | Ala | Ala | Asp | Pro | His | Glu | Cys | Tyr | Ala | Lys | Val | Phe | Asp | Glu |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Phe | Lys | Pro | Leu | Val | Glu | Glu | Pro | Gln | Asn | Leu | Ile | Lys | Gln | Asn | Cys |
| | | | | 405 | | | | | 410 | | | | | 415 | |
| Glu | Leu | Phe | Glu | Gln | Leu | Gly | Glu | Tyr | Lys | Phe | Gln | Asn | Ala | Leu | Leu |
| | | | 420 | | | | 425 | | | | | | 430 | | |
| Val | Arg | Tyr | Thr | Lys | Lys | Val | Pro | Gln | Val | Ser | Thr | Pro | Thr | Leu | Val |
| | | 435 | | | | | 440 | | | | | 445 | | | |
| Glu | Val | Ser | Arg | Asn | Leu | Gly | Lys | Val | Gly | Ser | Lys | Cys | Cys | Lys | His |
| | 450 | | | | | 455 | | | | | 460 | | | | |
| Pro | Glu | Ala | Lys | Arg | Met | Pro | Cys | Ala | Glu | Asp | Tyr | Leu | Ser | Val | Val |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 |
| Leu | Asn | Gln | Leu | Cys | Val | Leu | His | Glu | Lys | Thr | Pro | Val | Ser | Asp | Arg |
| | | | | 485 | | | | | 490 | | | | | 495 | |
| Val | Thr | Lys | Cys | Cys | Thr | Glu | Ser | Leu | Val | Asn | Arg | Arg | Pro | Cys | Phe |
| | | | 500 | | | | | 505 | | | | | 510 | | |
| Ser | Ala | Leu | Glu | Val | Asp | Glu | Thr | Tyr | Val | Pro | Lys | Glu | Phe | Asn | Ala |

| 515 | | | | | 520 | | | | | 525 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Thr | Phe | Thr | Phe | His | Ala | Asp | Ile | Cys | Thr | Leu | Ser | Glu | Lys | Glu |
| 530 | | | | | | 535 | | | | | 540 | | | | |
| Arg | Gln | Ile | Lys | Lys | Gln | Thr | Ala | Leu | Val | Glu | Leu | Val | Lys | His | Lys |
| 545 | | | | | 550 | | | | | 555 | | | | | 560 |
| Pro | Lys | Ala | Thr | Lys | Glu | Gln | Leu | Lys | Ala | Val | Met | Asp | Asp | Phe | Ala |
| | | | | 565 | | | | | 570 | | | | | 575 | |
| Ala | Phe | Val | Glu | Lys | Cys | Cys | Lys | Ala | Asp | Asp | Lys | Glu | Thr | Cys | Phe |
| | | | 580 | | | | | 585 | | | | | 590 | | |
| Ala | Glu | Glu | Gly | Lys | Lys | Leu | Val | Ala | Ala | Ser | Gln | Ala | Ala | Leu | Gly |
| | | | 595 | | | | 600 | | | | | 605 | | | |
| Leu | Lys | Pro | Leu | Gln | Ser | Trp | Gly | Arg | Gly | Ser | Ala | Gly | Gly | Asn | Ala |
| 610 | | | | | 615 | | | | | 620 | | | | | |
| His | Ser | Pro | Leu | Gly | Val | Pro | Gly | Gly | Gly | Leu | Pro | Glu | His | Thr | Phe |
| 625 | | | | | 630 | | | | | 635 | | | | | 640 |
| Asn | Leu | Lys | Met | Phe | Leu | Glu | Asn | Val | Lys | Val | Asp | Phe | Leu | Arg | Ser |
| | | | | 645 | | | | | 650 | | | | | 655 | |
| Leu | Asn | Leu | Ser | Gly | Val | Pro | Ser | Gln | Asp | Lys | Thr | Arg | Val | Glu | Pro |
| | | | 660 | | | | | 665 | | | | | 670 | | |
| Pro | Gln | Tyr | Met | Ile | Asp | Leu | Tyr | Asn | Arg | Tyr | Thr | Ser | Asp | Lys | Ser |
| | | | 675 | | | | 680 | | | | | 685 | | | |
| Thr | Thr | Pro | Ala | Ser | Asn | Ile | Val | Arg | Ser | Phe | Ser | Met | Glu | Asp | Ala |
| | | | 690 | | | 695 | | | | | 700 | | | | |
| Ile | Ser | Ile | Thr | Ala | Thr | Glu | Asp | Phe | Pro | Phe | Gln | Lys | His | Ile | Leu |
| 705 | | | | | 710 | | | | | 715 | | | | | 720 |
| Leu | Phe | Asn | Ile | Ser | Ile | Pro | Arg | His | Glu | Gln | Ile | Thr | Arg | Ala | Glu |
| | | | | 725 | | | | | 730 | | | | | 735 | |
| Leu | Arg | Leu | Tyr | Val | Ser | Cys | Gln | Asn | His | Val | Asp | Pro | Ser | His | Asp |
| | | | 740 | | | | | 745 | | | | | 750 | | |
| Leu | Lys | Gly | Ser | Val | Val | Ile | Tyr | Asp | Val | Leu | Asp | Gly | Thr | Asp | Ala |
| | | | 755 | | | | 760 | | | | | 765 | | | |
| Trp | Asp | Ser | Ala | Thr | Glu | Thr | Lys | Thr | Phe | Leu | Val | Ser | Gln | Asp | Ile |
| | | | 770 | | | 775 | | | | | 780 | | | | |
| Gln | Asp | Glu | Gly | Trp | Glu | Thr | Leu | Glu | Val | Ser | Ser | Ala | Val | Lys | Arg |
| 785 | | | | | 790 | | | | | 795 | | | | | 800 |
| Trp | Val | Arg | Ser | Asp | Ser | Thr | Lys | Ser | Lys | Asn | Lys | Leu | Glu | Val | Thr |
| | | | | 805 | | | | | 810 | | | | 815 | | |
| Val | Glu | Ser | His | Arg | Lys | Gly | Cys | Asp | Thr | Leu | Asp | Ile | Ser | Val | Pro |
| | | | 820 | | | | | 825 | | | | | 830 | | |
| Pro | Gly | Ser | Arg | Asn | Leu | Pro | Phe | Phe | Val | Val | Phe | Ser | Asn | Asp | His |
| | | | 835 | | | | 840 | | | | | 845 | | | |
| Ser | Ser | Gly | Thr | Lys | Glu | Thr | Arg | Leu | Glu | Leu | Arg | Glu | Met | Ile | Ser |

| 850 | 855 | 860 |
|--|-----|-----|
| His Glu Gln Glu Ser Val Leu Lys Lys Leu Ser Lys Asp Gly Ser Thr 865 870 875 880 | | |
| Glu Ala Gly Glu Ser Ser His Glu Glu Asp Thr Asp Gly His Val Ala 885 890 895 | | |
| Ala Gly Ser Thr Leu Ala Arg Arg Lys Arg Ser Ala Gly Ala Gly Ser 900 905 910 | | |
| His Cys Gln Lys Thr Ser Leu Arg Val Asn Phe Glu Asp Ile Gly Trp 915 920 925 | | |
| Asp Ser Trp Ile Ile Ala Pro Lys Glu Tyr Glu Ala Tyr Glu Cys Lys 930 935 940 | | |
| Gly Gly Cys Phe Phe Pro Leu Ala Asp Asp Val Thr Pro Thr Lys His 945 950 955 960 | | |
| Ala Ile Val Gln Thr Leu Val His Leu Lys Phe Pro Thr Lys Val Gly 965 970 975 | | |
| Lys Ala Cys Cys Val Pro Thr Lys Leu Ser Pro Ile Ser Val Leu Tyr 980 985 990 | | |
| Lys Asp Asp Met Gly Val Pro Thr Leu Lys Tyr His Tyr Glu Gly Met 995 1000 1005 | | |
| Ser Val Ala Glu Cys Gly Cys Arg 1010 1015 | | |

<210> 386
 <211> 769
 <212> PRT
 <213> Homo sapiens

| |
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| <400> 386 |
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| Ile Ser Ala Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg 20 25 30 |
| Thr Leu Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys 35 40 45 |
| Leu Lys Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn 50 55 60 |
| Gln Phe Gln Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln 65 70 75 80 |
| Gln Ile Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp 85 90 95 |
| Glu Thr Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn 100 105 110 |
| Asp Leu Glu Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro 115 120 125 |

Leu Met Lys Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg
 130 135 140
 Ile Thr Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu
 145 150 155 160
 Val Val Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu
 165 170 175
 Gln Glu Ser Leu Arg Ser Lys Glu Asp Ala His Lys Ser Glu Val Ala
 180 185 190
 His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
 195 200 205
 Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
 210 215 220
 Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
 225 230 235 240
 Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
 245 250 255
 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
 260 265 270
 Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln
 275 280 285
 His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
 290 295 300
 Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys
 305 310 315 320
 Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro
 325 330 335
 Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys
 340 345 350
 Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu
 355 360 365
 Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys
 370 375 380
 Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val
 385 390 395 400
 Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser
 405 410 415
 Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly
 420 425 430
 Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile
 435 440 445
 Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu
 450 455 460

Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp
 465 470 475 480
 Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser
 485 490 495
 Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly
 500 505 510
 Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val
 515 520 525
 Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys
 530 535 540
 Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu
 545 550 555 560
 Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys
 565 570 575
 Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu
 580 585 590
 Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val
 595 600 605
 Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His
 610 615 620
 Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val
 625 630 635 640
 Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg
 645 650 655
 Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe
 660 665 670
 Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala
 675 680 685
 Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu
 690 695 700
 Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys
 705 710 715 720
 Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala
 725 730 735
 Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe
 740 745 750
 Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
 755 760 765
 Leu

<210> 387
 <211> 769
 <212> PRT
 <213> Homo sapiens

<400> 387
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 Arg Tyr Leu Leu Glu Ala Lys Glu Ala Glu Asn Ile Thr Thr Gly Cys
 35 40 45
 Ala Glu His Cys Ser Leu Asn Glu Asn Ile Thr Val Pro Asp Thr Lys
 50 55 60
 Val Asn Phe Tyr Ala Trp Lys Arg Met Glu Val Gly Gln Gln Ala Val
 65 70 75 80
 Glu Val Trp Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu Arg Gly
 85 90 95
 Gln Ala Leu Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu Gln Leu
 100 105 110
 His Val Asp Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr Leu Leu
 115 120 125
 Arg Ala Leu Gly Ala Gln Lys Glu Ala Ile Ser Pro Pro Asp Ala Ala
 130 135 140
 Ser Ala Ala Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg Lys Leu
 145 150 155 160
 Phe Arg Val Tyr Ser Asn Phe Leu Arg Gly Lys Leu Lys Leu Tyr Thr
 165 170 175
 Gly Glu Ala Cys Arg Thr Gly Asp Asp Ala His Lys Ser Glu Val Ala
 180 185 190
 His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
 195 200 205
 Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
 210 215 220
 Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
 225 230 235 240
 Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
 245 250 255
 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
 260 265 270
 Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln
 275 280 285
 His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
 290 295 300

Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys
 305 310 315 320
 Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro
 325 330 335
 Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys
 340 345 350
 Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu
 355 360 365
 Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys
 370 375 380
 Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val
 385 390 395 400
 Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser
 405 410 415
 Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly
 420 425 430
 Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile
 435 440 445
 Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu
 450 455 460
 Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp
 465 470 475 480
 Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser
 485 490 495
 Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly
 500 505 510
 Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val
 515 520 525
 Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys
 530 535 540
 Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu
 545 550 555 560
 Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys
 565 570 575
 Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu
 580 585 590
 Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val
 595 600 605
 Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His
 610 615 620
 Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val
 625 630 635 640

Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg
 645 650 655
 Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe
 660 665 670
 Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala
 675 680 685
 Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu
 690 695 700
 Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys
 705 710 715 720
 Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala
 725 730 735
 Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe
 740 745 750
 Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
 755 760 765
 Leu

<210> 388
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 <212> PRT
 <213> Homo sapiens

<400> 388
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 35 40 45
 Tyr Ile Val Arg Leu Leu Ser Lys Lys Val Lys Asn Met Asp Ala His
 50 55 60
 Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe
 65 70 75 80
 Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro
 85 90 95
 Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys
 100 105 110
 Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His
 115 120 125
 Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr
 130 135 140
 Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn
 145 150 155 160

Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu
 165 170 175
 Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu
 180 185 190
 Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro
 195 200 205
 Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala
 210 215 220
 Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu
 225 230 235 240
 Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys
 245 250 255
 Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe
 260 265 270
 Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu
 275 280 285
 Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr
 290 295 300
 Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp
 305 310 315 320
 Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu
 325 330 335
 Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala
 340 345 350
 Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala
 355 360 365
 Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys
 370 375 380
 Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro
 385 390 395 400
 Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr
 405 410 415
 Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala
 420 425 430
 Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu
 435 440 445
 Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe
 450 455 460
 Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser
 465 470 475 480
 Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser
 485 490 495

Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp
 500 505 510
 Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr
 515 520 525
 Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn
 530 535 540
 Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro
 545 550 555 560
 Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr
 565 570 575
 Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu
 580 585 590
 Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val
 595 600 605
 Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp
 610 615 620
 Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser
 625 630 635 640
 Gln Ala Ala Leu Gly Leu
 645

<210> 389
 <211> 716
 <212> PRT
 <213> Homo sapiens

<400> 389
 Met Lys Val Ser Val Ala Ala Leu Ser Cys Leu Met Leu Val Thr Ala
 1 5 10 15
 Leu Gly Ser Gln Ala Ser Ala Gly Ala Gly Ser His Cys Gln Lys Thr
 20 25 30
 Ser Leu Arg Val Asn Phe Glu Asp Ile Gly Trp Asp Ser Trp Ile Ile
 35 40 45
 Ala Pro Lys Glu Tyr Glu Ala Tyr Glu Cys Lys Gly Gly Cys Phe Phe
 50 55 60
 Pro Leu Ala Asp Asp Val Thr Pro Thr Lys His Ala Ile Val Gln Thr
 65 70 75 80
 Leu Val His Leu Lys Phe Pro Thr Lys Val Gly Lys Ala Cys Cys Val
 85 90 95
 Pro Thr Lys Leu Ser Pro Ile Ser Val Leu Tyr Lys Asp Asp Met Gly
 100 105 110
 Val Pro Thr Leu Lys Tyr His Tyr Glu Gly Met Ser Val Ala Glu Cys
 115 120 125
 Gly Cys Arg Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp
 130 135 140

Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln
 145 150 155 160
 Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu
 165 170 175
 Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn
 180 185 190
 Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val
 195 200 205
 Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys
 210 215 220
 Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn
 225 230 235 240
 Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr
 245 250 255
 Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu
 260 265 270
 Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe
 275 280 285
 Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp
 290 295 300
 Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly
 305 310 315 320
 Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys
 325 330 335
 Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln
 340 345 350
 Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp
 355 360 365
 Leu Thr Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys
 370 375 380
 Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp
 385 390 395 400
 Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu
 405 410 415
 Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp
 420 425 430
 Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys
 435 440 445
 Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu
 450 455 460
 Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu
 465 470 475 480

Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp
 485 490 495
 Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val
 500 505 510
 Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln
 515 520 525
 Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys
 530 535 540
 Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn
 545 550 555 560
 Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg
 565 570 575
 Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys
 580 585 590
 Val Leu His Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys
 595 600 605
 Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val
 610 615 620
 Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe
 625 630 635 640
 His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys
 645 650 655
 Gln Thr Ala Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys
 660 665 670
 Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys
 675 680 685
 Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys
 690 695 700
 Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly Leu
 705 710 715

<210> 390
 <211> 719
 <212> PRT
 <213> Homo sapiens

<400> 390
 Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1 5 10 15
 Tyr Ser Arg Gly Val Phe Arg Arg Asp Ala His Lys Ser Glu Val Ala
 20 25 30
 His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
 35 40 45

Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
 50 55 60
 Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
 65 70 75 80
 Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
 85 90 95
 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
 100 105 110
 Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln
 115 120 125
 His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
 130 135 140
 Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys
 145 150 155 160
 Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro
 165 170 175
 Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys
 180 185 190
 Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu
 195 200 205
 Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys
 210 215 220
 Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val
 225 230 235 240
 Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser
 245 250 255
 Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly
 260 265 270
 Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile
 275 280 285
 Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu
 290 295 300
 Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp
 305 310 315 320
 Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser
 325 330 335
 Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly
 340 345 350
 Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val
 355 360 365
 Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys
 370 375 380

Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu
 385 390 395 400
 Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys
 405 410 415
 Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu
 420 425 430
 Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val
 435 440 445
 Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His
 450 455 460
 Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val
 465 470 475 480
 Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg
 485 490 495
 Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe
 500 505 510
 Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala
 515 520 525
 Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu
 530 535 540
 Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys
 545 550 555 560
 Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala
 565 570 575
 Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe
 580 585 590
 Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
 595 600 605
 Leu Ser Ala Gly Ala Gly Ser His Cys Gln Lys Thr Ser Leu Arg Val
 610 615 620
 Asn Phe Glu Asp Ile Gly Trp Asp Ser Trp Ile Ile Ala Pro Lys Glu
 625 630 635 640
 Tyr Glu Ala Tyr Glu Cys Lys Gly Gly Cys Phe Phe Pro Leu Ala Asp
 645 650 655
 Asp Val Thr Pro Thr Lys His Ala Ile Val Gln Thr Leu Val His Leu
 660 665 670
 Lys Phe Pro Thr Lys Val Gly Lys Ala Cys Cys Val Pro Thr Lys Leu
 675 680 685
 Ser Pro Ile Ser Val Leu Tyr Lys Asp Asp Met Gly Val Pro Thr Leu
 690 695 700
 Lys Tyr His Tyr Glu Gly Met Ser Val Ala Glu Cys Gly Cys Arg
 705 710 715

<210> 391
 <211> 736
 <212> PRT
 <213> Homo sapiens

<400> 391
 Met Arg Phe Pro Ser Ile Phe Thr Ala Val Leu Phe Ala Ala Ser Ser
 1 5 10 15
 Ala Leu Ala Ala Pro Val Asn Thr Thr Thr Glu Asp Glu Thr Ala Gln
 20 25 30
 Ile Pro Ala Glu Ala Val Ile Gly Tyr Ser Asp Leu Glu Gly Asp Phe
 35 40 45
 Asp Val Ala Val Leu Pro Phe Ser Asn Ser Thr Asn Asn Gly Leu Leu
 50 55 60
 Phe Ile Asn Thr Thr Ile Ala Ser Ile Ala Ala Lys Glu Glu Gly Val
 65 70 75 80
 Ser Leu Asp Lys Arg Gly Pro Tyr His Pro Ser Glu Cys Cys Phe Thr
 85 90 95
 Tyr Thr Thr Tyr Lys Ile Pro Arg Gln Arg Ile Met Asp Tyr Tyr Glu
 100 105 110
 Thr Asn Ser Gln Cys Ser Lys Pro Gly Ile Val Phe Ile Thr Lys Arg
 115 120 125
 Gly His Ser Val Cys Thr Asn Pro Ser Asp Lys Trp Val Gln Asp Tyr
 130 135 140
 Ile Lys Asp Met Lys Glu Asn Asp Ala His Lys Ser Glu Val Ala His
 145 150 155 160
 Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile
 165 170 175
 Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys
 180 185 190
 Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu
 195 200 205
 Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp Lys
 210 215 220
 Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp
 225 230 235 240
 Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His
 245 250 255
 Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp
 260 265 270
 Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys
 275 280 285
 Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu

| 290 | 295 | 300 |
|--|-----|-----|
| Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys 305 310 315 320 | | |
| Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu 325 330 335 | | |
| Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala 340 345 350 | | |
| Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala 355 360 365 | | |
| Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys 370 375 380 | | |
| Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly Asp 385 390 395 400 | | |
| Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys 405 410 415 | | |
| Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys 420 425 430 | | |
| Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu 435 440 445 | | |
| Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser Lys 450 455 460 | | |
| Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly Met 465 470 475 480 | | |
| Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu 485 490 495 | | |
| Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys 500 505 510 | | |
| Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe 515 520 525 | | |
| Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu 530 535 540 | | |
| Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val 545 550 555 560 | | |
| Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu 565 570 575 | | |
| Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro 580 585 590 | | |
| Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val Leu 595 600 605 | | |
| Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg Val 610 615 620 | | |
| Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser | | |

| | | | | | | |
|---|---|-----|-----|-----|-----|-----|
| 625 | | 630 | | 635 | | 640 |
| Ala Leu Glu Val Asp | Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu | | | | | |
| | 645 | | 650 | | 655 | |
| Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg | | | | | | |
| | 660 | | 665 | | 670 | |
| Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys Pro | | | | | | |
| | 675 | | 680 | | 685 | |
| Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala | | | | | | |
| | 690 | | 695 | | 700 | |
| Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala | | | | | | |
| | 705 | | 710 | | 715 | 720 |
| Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly Leu | | | | | | |
| | 725 | | 730 | | 735 | |

<210> 392
 <211> 1016
 <212> PRT
 <213> Homo sapiens

<400> 392

| | | | | | | | | | | | | | | |
|---|-----|-----|---|----|-----|-----|-----|----|-----|-----|----|--|-----|-----|
| Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala | | | | | | | | | | | | | | |
| 1 | | | 5 | | | | 10 | | | | | | 15 | |
| Tyr Ser Arg Gly Val Phe Arg Arg Lys Pro Leu Gln Ser Trp Gly Arg | | | | | | | | | | | | | | |
| | 20 | | | | | 25 | | | | | 30 | | | |
| Gly Ser Ala Gly Gly Asn Ala His Ser Pro Leu Gly Val Pro Gly Gly | | | | | | | | | | | | | | |
| | 35 | | | | 40 | | | | | 45 | | | | |
| Gly Leu Pro Glu His Thr Phe Asn Leu Lys Met Phe Leu Glu Asn Val | | | | | | | | | | | | | | |
| | 50 | | | | 55 | | | | 60 | | | | | |
| Lys Val Asp Phe Leu Arg Ser Leu Asn Leu Ser Gly Val Pro Ser Gln | | | | | | | | | | | | | | |
| | 65 | | | 70 | | | | 75 | | | | | 80 | |
| Asp Lys Thr Arg Val Glu Pro Pro Gln Tyr Met Ile Asp Leu Tyr Asn | | | | | | | | | | | | | | |
| | | 85 | | | | | 90 | | | | | | 95 | |
| Arg Tyr Thr Ser Asp Lys Ser Thr Thr Pro Ala Ser Asn Ile Val Arg | | | | | | | | | | | | | | |
| | 100 | | | | | | 105 | | | | | | 110 | |
| Ser Phe Ser Met Glu Asp Ala Ile Ser Ile Thr Ala Thr Glu Asp Phe | | | | | | | | | | | | | | |
| | 115 | | | | | 120 | | | | 125 | | | | |
| Pro Phe Gln Lys His Ile Leu Leu Phe Asn Ile Ser Ile Pro Arg His | | | | | | | | | | | | | | |
| | 130 | | | | | 135 | | | | 140 | | | | |
| Glu Gln Ile Thr Arg Ala Glu Leu Arg Leu Tyr Val Ser Cys Gln Asn | | | | | | | | | | | | | | |
| | 145 | | | | 150 | | | | 155 | | | | | 160 |
| His Val Asp Pro Ser His Asp Leu Lys Gly Ser Val Val Ile Tyr Asp | | | | | | | | | | | | | | |
| | | 165 | | | | | 170 | | | | | | 175 | |

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| Val | Leu | Asp | Gly | Thr | Asp | Ala | Trp | Asp | Ser | Ala | Thr | Glu | Thr | Lys | Thr | | |
| | | | 180 | | | | | 185 | | | | | 190 | | | | |
| Phe | Leu | Val | Ser | Gln | Asp | Ile | Gln | Asp | Glu | Gly | Trp | Glu | Thr | Leu | Glu | | |
| | | 195 | | | | | 200 | | | | | 205 | | | | | |
| Val | Ser | Ser | Ala | Val | Lys | Arg | Trp | Val | Arg | Ser | Asp | Ser | Thr | Lys | Ser | | |
| | 210 | | | | | 215 | | | | | 220 | | | | | | |
| Lys | Asn | Lys | Leu | Glu | Val | Thr | Val | Glu | Ser | His | Arg | Lys | Gly | Cys | Asp | | |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 | | |
| Thr | Leu | Asp | Ile | Ser | Val | Pro | Pro | Gly | Ser | Arg | Asn | Leu | Pro | Phe | Phe | | |
| | | | 245 | | | | | | 250 | | | | | 255 | | | |
| Val | Val | Phe | Ser | Asn | Asp | His | Ser | Ser | Gly | Thr | Lys | Glu | Thr | Arg | Leu | | |
| | | | 260 | | | | | 265 | | | | | 270 | | | | |
| Glu | Leu | Arg | Glu | Met | Ile | Ser | His | Glu | Gln | Glu | Ser | Val | Leu | Lys | Lys | | |
| | | 275 | | | | | 280 | | | | | 285 | | | | | |
| Leu | Ser | Lys | Asp | Gly | Ser | Thr | Glu | Ala | Gly | Glu | Ser | Ser | His | Glu | Glu | | |
| | 290 | | | | | 295 | | | | | 300 | | | | | | |
| Asp | Thr | Asp | Gly | His | Val | Ala | Ala | Gly | Ser | Thr | Leu | Ala | Arg | Arg | Lys | | |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 | | |
| Arg | Ser | Ala | Gly | Ala | Gly | Ser | His | Cys | Gln | Lys | Thr | Ser | Leu | Arg | Val | | |
| | | | 325 | | | | | 330 | | | | | | 335 | | | |
| Asn | Phe | Glu | Asp | Ile | Gly | Trp | Asp | Ser | Trp | Ile | Ile | Ala | Pro | Lys | Glu | | |
| | | | 340 | | | | 345 | | | | | | 350 | | | | |
| Tyr | Glu | Ala | Tyr | Glu | Cys | Lys | Gly | Gly | Cys | Phe | Phe | Pro | Leu | Ala | Asp | | |
| | | 355 | | | | | 360 | | | | | 365 | | | | | |
| Asp | Val | Thr | Pro | Thr | Lys | His | Ala | Ile | Val | Gln | Thr | Leu | Val | His | Leu | | |
| | 370 | | | | | 375 | | | | | 380 | | | | | | |
| Lys | Phe | Pro | Thr | Lys | Val | Gly | Lys | Ala | Cys | Cys | Val | Pro | Thr | Lys | Leu | | |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 | | |
| Ser | Pro | Ile | Ser | Val | Leu | Tyr | Lys | Asp | Asp | Met | Gly | Val | Pro | Thr | Leu | | |
| | | | 405 | | | | | 410 | | | | | 415 | | | | |
| Lys | Tyr | His | Tyr | Glu | Gly | Met | Ser | Val | Ala | Glu | Cys | Gly | Cys | Arg | Asp | | |
| | | | 420 | | | | 425 | | | | | | 430 | | | | |
| Ala | His | Lys | Ser | Glu | Val | Ala | His | Arg | Phe | Lys | Asp | Leu | Gly | Glu | Glu | | |
| | | 435 | | | | 440 | | | | | | 445 | | | | | |
| Asn | Phe | Lys | Ala | Leu | Val | Leu | Ile | Ala | Phe | Ala | Gln | Tyr | Leu | Gln | Gln | | |
| | 450 | | | | | 455 | | | | | 460 | | | | | | |
| Cys | Pro | Phe | Glu | Asp | His | Val | Lys | Leu | Val | Asn | Glu | Val | Thr | Glu | Phe | | |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 | | |
| Ala | Lys | Thr | Cys | Val | Ala | Asp | Glu | Ser | Ala | Glu | Asn | Cys | Asp | Lys | Ser | | |
| | | | 485 | | | | | 490 | | | | | | 495 | | | |
| Leu | His | Thr | Leu | Phe | Gly | Asp | Lys | Leu | Cys | Thr | Val | Ala | Thr | Leu | Arg | | |
| | | | 500 | | | | 505 | | | | | | 510 | | | | |

Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu
 515 520 525
 Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro
 530 535 540
 Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp
 545 550 555 560
 Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg
 565 570 575
 His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr
 580 585 590
 Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys
 595 600 605
 Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser
 610 615 620
 Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg
 625 630 635 640
 Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys
 645 650 655
 Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val
 660 665 670
 His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg
 675 680 685
 Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser
 690 695 700
 Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys
 705 710 715 720
 Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu
 725 730 735
 Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu
 740 745 750
 Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg
 755 760 765
 His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr
 770 775 780
 Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys
 785 790 795 800
 Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln
 805 810 815
 Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr
 820 825 830
 Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln
 835 840 845

Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val
 850 855 860
 Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala
 865 870 875 880
 Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu
 885 890 895
 Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu
 900 905 910
 Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr
 915 920 925
 Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile
 930 935 940
 Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu
 945 950 955 960
 Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys
 965 970 975
 Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala
 980 985 990
 Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala
 995 1000 1005
 Ala Ser Gln Ala Ala Leu Gly Leu
 1010 1015

<210> 393
 <211> 668
 <212> PRT
 <213> Homo sapiens

<400> 393
 Met Lys Lys Val Cys Trp Val Gly Ala Leu Ala His Leu Val Leu Cys
 1 5 10 15
 Glu Arg Trp Leu Thr Ala Gly Cys Leu Leu Tyr Val Gly Val Ile Gln
 20 25 30
 Pro Cys Lys Gly Ser Pro Ser Ser Val Cys Lys Ala Arg Arg Cys Leu
 35 40 45
 His Pro Lys Tyr Arg Ile Lys Arg Tyr Gly Tyr Tyr Lys Tyr Ser Val
 50 55 60
 Arg Leu Ile Ile Cys His His His Pro His Ala Leu Lys Ala Glu Leu
 65 70 75 80
 Thr Asp Asp Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp
 85 90 95
 Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln
 100 105 110

Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu
 115 120 125
 Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn
 130 135 140
 Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val
 145 150 155 160
 Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys
 165 170 175
 Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn
 180 185 190
 Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr
 195 200 205
 Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu
 210 215 220
 Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe
 225 230 235 240
 Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp
 245 250 255
 Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly
 260 265 270
 Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys
 275 280 285
 Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln
 290 295 300
 Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp
 305 310 315 320
 Leu Thr Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys
 325 330 335
 Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp
 340 345 350
 Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu
 355 360 365
 Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp
 370 375 380
 Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys
 385 390 395 400
 Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu
 405 410 415
 Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu
 420 425 430
 Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp
 435 440 445

Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val
 450 455 460
 Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln
 465 470 475 480
 Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys
 485 490 495
 Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn
 500 505 510
 Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg
 515 520 525
 Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys
 530 535 540
 Val Leu His Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys
 545 550 555 560
 Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val
 565 570 575
 Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe
 580 585 590
 His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys
 595 600 605
 Gln Thr Ala Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys
 610 615 620
 Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys
 625 630 635 640
 Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys
 645 650 655
 Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly Leu
 660 665

<210> 394
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 <212> PRT
 <213> Homo sapiens

<400> 394
 Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
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 20 25 30
 His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
 35 40 45
 Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
 50 55 60
 Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp

| 65 | | | | | 70 | | | | | | 75 | | | | | 80 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| Glu | Ser | Ala | Glu | Asn | Cys | Asp | Lys | Ser | Leu | His | Thr | Leu | Phe | Gly | Asp | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Lys | Leu | Cys | Thr | Val | Ala | Thr | Leu | Arg | Glu | Thr | Tyr | Gly | Glu | Met | Ala | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| Asp | Cys | Cys | Ala | Lys | Gln | Glu | Pro | Glu | Arg | Asn | Glu | Cys | Phe | Leu | Gln | |
| | | 115 | | | | | 120 | | | | | 125 | | | | |
| His | Lys | Asp | Asp | Asn | Pro | Asn | Leu | Pro | Arg | Leu | Val | Arg | Pro | Glu | Val | |
| | 130 | | | | | | 135 | | | | 140 | | | | | |
| Asp | Val | Met | Cys | Thr | Ala | Phe | His | Asp | Asn | Glu | Glu | Thr | Phe | Leu | Lys | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | |
| Lys | Tyr | Leu | Tyr | Glu | Ile | Ala | Arg | Arg | His | Pro | Tyr | Phe | Tyr | Ala | Pro | |
| | | | 165 | | | | | | 170 | | | | | 175 | | |
| Glu | Leu | Leu | Phe | Phe | Ala | Lys | Arg | Tyr | Lys | Ala | Ala | Phe | Thr | Glu | Cys | |
| | | | 180 | | | | | 185 | | | | | 190 | | | |
| Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala | Cys | Leu | Leu | Pro | Lys | Leu | Asp | Glu | |
| | | 195 | | | | | 200 | | | | | 205 | | | | |
| Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser | Ser | Ala | Lys | Gln | Arg | Leu | Lys | Cys | |
| | 210 | | | | | 215 | | | | | 220 | | | | | |
| Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe | Lys | Ala | Trp | Ala | Val | |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 | |
| Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu | Phe | Ala | Glu | Val | Ser | |
| | | | | 245 | | | | | 250 | | | | | 255 | | |
| Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | Val | His | Thr | Glu | Cys | Cys | His | Gly | |
| | | 260 | | | | | | 265 | | | | | 270 | | | |
| Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | Arg | Ala | Asp | Leu | Ala | Lys | Tyr | Ile | |
| | 275 | | | | | | 280 | | | | | 285 | | | | |
| Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu | Lys | Glu | Cys | Cys | Glu | |
| | 290 | | | | | 295 | | | | | 300 | | | | | |
| Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | Cys | Ile | Ala | Glu | Val | Glu | Asn | Asp | |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 | |
| Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | Leu | Ala | Ala | Asp | Phe | Val | Glu | Ser | |
| | | | | 325 | | | | | 330 | | | | | 335 | | |
| Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys | Asp | Val | Phe | Leu | Gly | |
| | | | 340 | | | | | 345 | | | | | 350 | | | |
| Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | Arg | His | Pro | Asp | Tyr | Ser | Val | Val | |
| | 355 | | | | | | 360 | | | | | 365 | | | | |
| Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | Tyr | Glu | Thr | Thr | Leu | Glu | Lys | Cys | |
| | 370 | | | | | 375 | | | | | | 380 | | | | |
| Cys | Ala | Ala | Ala | Asp | Pro | His | Glu | Cys | Tyr | Ala | Lys | Val | Phe | Asp | Glu | |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 | |
| Phe | Lys | Pro | Leu | Val | Glu | Glu | Pro | Gln | Asn | Leu | Ile | Lys | Gln | Asn | Cys | |

| 405 | | | | | 410 | | | | | 415 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Leu | Phe | Glu | Gln | Leu | Gly | Glu | Tyr | Lys | Phe | Gln | Asn | Ala | Leu | Leu |
| | | | 420 | | | | | 425 | | | | | 430 | | |
| Val | Arg | Tyr | Thr | Lys | Lys | Val | Pro | Gln | Val | Ser | Thr | Pro | Thr | Leu | Val |
| | | 435 | | | | | 440 | | | | | 445 | | | |
| Glu | Val | Ser | Arg | Asn | Leu | Gly | Lys | Val | Gly | Ser | Lys | Cys | Cys | Lys | His |
| | 450 | | | | | 455 | | | | | 460 | | | | |
| Pro | Glu | Ala | Lys | Arg | Met | Pro | Cys | Ala | Glu | Asp | Tyr | Leu | Ser | Val | Val |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 |
| Leu | Asn | Gln | Leu | Cys | Val | Leu | His | Glu | Lys | Thr | Pro | Val | Ser | Asp | Arg |
| | | | | 485 | | | | | 490 | | | | | 495 | |
| Val | Thr | Lys | Cys | Cys | Thr | Glu | Ser | Leu | Val | Asn | Arg | Arg | Pro | Cys | Phe |
| | | | 500 | | | | | 505 | | | | | 510 | | |
| Ser | Ala | Leu | Glu | Val | Asp | Glu | Thr | Tyr | Val | Pro | Lys | Glu | Phe | Asn | Ala |
| | | 515 | | | | | 520 | | | | | 525 | | | |
| Glu | Thr | Phe | Thr | Phe | His | Ala | Asp | Ile | Cys | Thr | Leu | Ser | Glu | Lys | Glu |
| | 530 | | | | | 535 | | | | | 540 | | | | |
| Arg | Gln | Ile | Lys | Lys | Gln | Thr | Ala | Leu | Val | Glu | Leu | Val | Lys | His | Lys |
| 545 | | | | | 550 | | | | | 555 | | | | | 560 |
| Pro | Lys | Ala | Thr | Lys | Glu | Gln | Leu | Lys | Ala | Val | Met | Asp | Asp | Phe | Ala |
| | | | | 565 | | | | | 570 | | | | | 575 | |
| Ala | Phe | Val | Glu | Lys | Cys | Cys | Lys | Ala | Asp | Asp | Lys | Glu | Thr | Cys | Phe |
| | | | 580 | | | | | 585 | | | | | 590 | | |
| Ala | Glu | Glu | Gly | Lys | Lys | Leu | Val | Ala | Ala | Ser | Gln | Ala | Ala | Leu | Gly |
| | | 595 | | | | | 600 | | | | | 605 | | | |
| Leu | Lys | Pro | Leu | Gln | Ser | Trp | Gly | Arg | Gly | Ser | Ala | Gly | Gly | Asn | Ala |
| | 610 | | | | | 615 | | | | | 620 | | | | |
| His | Ser | Pro | Leu | Gly | Val | Pro | Gly | Gly | Gly | Leu | Pro | Glu | His | Thr | Phe |
| 625 | | | | | 630 | | | | | 635 | | | | | 640 |
| Asn | Leu | Lys | Met | Phe | Leu | Glu | Asn | Val | Lys | Val | Asp | Phe | Leu | Arg | Ser |
| | | | | 645 | | | | | 650 | | | | | 655 | |
| Leu | Asn | Leu | Ser | Gly | Val | Pro | Ser | Gln | Asp | Lys | Thr | Arg | Val | Glu | Pro |
| | | | 660 | | | | | 665 | | | | | 670 | | |
| Pro | Gln | Tyr | Met | Ile | Asp | Leu | Tyr | Asn | Arg | Tyr | Thr | Ser | Asp | Lys | Ser |
| | | 675 | | | | | 680 | | | | | 685 | | | |
| Thr | Thr | Pro | Ala | Ser | Asn | Ile | Val | Arg | Ser | Phe | Ser | Met | Glu | Asp | Ala |
| | | 690 | | | | 695 | | | | | 700 | | | | |
| Ile | Ser | Ile | Thr | Ala | Thr | Glu | Asp | Phe | Pro | Phe | Gln | Lys | His | Ile | Leu |
| 705 | | | | | 710 | | | | | 715 | | | | | 720 |
| Leu | Phe | Asn | Ile | Ser | Ile | Pro | Arg | His | Glu | Gln | Ile | Thr | Arg | Ala | Glu |
| | | | | 725 | | | | | 730 | | | | | 735 | |
| Leu | Arg | Leu | Tyr | Val | Ser | Cys | Gln | Asn | His | Val | Asp | Pro | Ser | His | Asp |

| 740 | | | | | 745 | | | | | 750 | | | | | |
|-----|------|-----|-----|-----|-----|------|------|-----|-----|-----|-----|------|-----|-----|-----|
| Leu | Lys | Gly | Ser | Val | Val | Ile | Tyr | Asp | Val | Leu | Asp | Gly | Thr | Asp | Ala |
| | | 755 | | | | | 760 | | | | | 765 | | | |
| Trp | Asp | Ser | Ala | Thr | Glu | Thr | Lys | Thr | Phe | Leu | Val | Ser | Gln | Asp | Ile |
| | 770 | | | | | 775 | | | | | 780 | | | | |
| Gln | Asp | Glu | Gly | Trp | Glu | Thr | Leu | Glu | Val | Ser | Ser | Ala | Val | Lys | Arg |
| 785 | | | | | 790 | | | | | 795 | | | | | 800 |
| Trp | Val | Arg | Ser | Asp | Ser | Thr | Lys | Ser | Lys | Asn | Lys | Leu | Glu | Val | Thr |
| | | | | 805 | | | | | 810 | | | | | 815 | |
| Val | Glu | Ser | His | Arg | Lys | Gly | Cys | Asp | Thr | Leu | Asp | Ile | Ser | Val | Pro |
| | | | 820 | | | | | 825 | | | | | 830 | | |
| Pro | Gly | Ser | Arg | Asn | Leu | Pro | Phe | Phe | Val | Val | Phe | Ser | Asn | Asp | His |
| | | | 835 | | | | 840 | | | | | 845 | | | |
| Ser | Ser | Gly | Thr | Lys | Glu | Thr | Arg | Leu | Glu | Leu | Arg | Glu | Met | Ile | Ser |
| | 850 | | | | | 855 | | | | | 860 | | | | |
| His | Glu | Gln | Glu | Ser | Val | Leu | Lys | Lys | Leu | Ser | Lys | Asp | Gly | Ser | Thr |
| 865 | | | | | 870 | | | | | 875 | | | | | 880 |
| Glu | Ala | Gly | Glu | Ser | Ser | His | Glu | Glu | Asp | Thr | Asp | Gly | His | Val | Ala |
| | | | | 885 | | | | | 890 | | | | | 895 | |
| Ala | Gly | Ser | Thr | Leu | Ala | Arg | Arg | Lys | Arg | Ser | Ala | Gly | Ala | Gly | Ser |
| | | | 900 | | | | | 905 | | | | | 910 | | |
| His | Cys | Gln | Lys | Thr | Ser | Leu | Arg | Val | Asn | Phe | Glu | Asp | Ile | Gly | Trp |
| | | 915 | | | | | 920 | | | | | 925 | | | |
| Asp | Ser | Trp | Ile | Ile | Ala | Pro | Lys | Glu | Tyr | Glu | Ala | Tyr | Glu | Cys | Lys |
| | | 930 | | | | 935 | | | | | 940 | | | | |
| Gly | Gly | Cys | Phe | Phe | Pro | Leu | Ala | Asp | Asp | Val | Thr | Pro | Thr | Lys | His |
| 945 | | | | | 950 | | | | | 955 | | | | | 960 |
| Ala | Ile | Val | Gln | Thr | Leu | Val | His | Leu | Lys | Phe | Pro | Thr | Lys | Val | Gly |
| | | | | 965 | | | | | 970 | | | | | 975 | |
| Lys | Ala | Cys | Cys | Val | Pro | Thr | Lys | Leu | Ser | Pro | Ile | Ser | Val | Leu | Tyr |
| | | | 980 | | | | | 985 | | | | | 990 | | |
| Lys | Asp | Asp | Met | Gly | Val | Pro | Thr | Leu | Lys | Tyr | His | Tyr | Glu | Gly | Met |
| | | 995 | | | | | 1000 | | | | | 1005 | | | |
| Ser | Val | Ala | Glu | Cys | Gly | Cys | Arg | | | | | | | | |
| | 1010 | | | | | 1015 | | | | | | | | | |

<210> 395
 <211> 954
 <212> PRT
 <213> Homo sapiens

<400> 395
 Met Ala Gly Pro Ala Thr Gln Ser Pro Met Lys Leu Met Ala Leu Gln
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 20 25 30
 Leu Gly Pro Ala Ser Ser Leu Pro Gln Ser Phe Leu Leu Lys Cys Leu
 35 40 45
 Glu Gln Val Arg Lys Ile Gln Gly Asp Gly Ala Ala Leu Gln Glu Lys
 50 55 60
 Leu Cys Ala Thr Tyr Lys Leu Cys His Pro Glu Glu Leu Val Leu Leu
 65 70 75 80
 Gly His Ser Leu Gly Ile Pro Trp Ala Pro Leu Ser Ser Cys Pro Ser
 85 90 95
 Gln Ala Leu Gln Leu Ala Gly Cys Leu Ser Gln Leu His Ser Gly Leu
 100 105 110
 Phe Leu Tyr Gln Gly Leu Leu Gln Ala Leu Glu Gly Ile Ser Pro Glu
 115 120 125
 Leu Gly Pro Thr Leu Asp Thr Leu Gln Leu Asp Val Ala Asp Phe Ala
 130 135 140
 Thr Thr Ile Trp Gln Gln Met Glu Glu Leu Gly Met Ala Pro Ala Leu
 145 150 155 160
 Gln Pro Thr Gln Gly Ala Met Pro Ala Phe Ala Ser Ala Phe Gln Arg
 165 170 175
 Arg Ala Gly Gly Val Leu Val Ala Ser His Leu Gln Ser Phe Leu Glu
 180 185 190
 Val Ser Tyr Arg Val Leu Arg His Leu Ala Gln Pro Asp Ala His Lys
 195 200 205
 Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys
 210 215 220
 Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe
 225 230 235 240
 Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr
 245 250 255
 Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr
 260 265 270
 Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr
 275 280 285
 Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu
 290 295 300
 Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val
 305 310 315 320
 Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu
 325 330 335
 Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr
 340 345 350

Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala
355 360 365
Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro
370 375 380
Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln
385 390 395 400
Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys
405 410 415
Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe
420 425 430
Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu
435 440 445
Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu
450 455 460
Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys
465 470 475 480
Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu
485 490 495
Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp
500 505 510
Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp
515 520 525
Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp
530 535 540
Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr
545 550 555 560
Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys
565 570 575
Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile
580 585 590
Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln
595 600 605
Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr
610 615 620
Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys
625 630 635 640
Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr
645 650 655
Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro
660 665 670
Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg
675 680 685

Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys
 690 695 700
 Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu
 705 710 715 720
 Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu
 725 730 735
 Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met
 740 745 750
 Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys
 755 760 765
 Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln
 770 775 780
 Ala Ala Leu Gly Leu Ala Pro Pro Arg Leu Ile Cys Asp Ser Arg Val
 785 790 795 800
 Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu Ala Glu Asn Ile Thr Thr
 805 810 815
 Gly Cys Ala Glu His Cys Ser Leu Asn Glu Asn Ile Thr Val Pro Asp
 820 825 830
 Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg Met Glu Val Gly Gln Gln
 835 840 845
 Ala Val Glu Val Trp Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu
 850 855 860
 Arg Gly Gln Ala Leu Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu
 865 870 875 880
 Gln Leu His Val Asp Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr
 885 890 895
 Leu Leu Arg Ala Leu Arg Ala Gln Lys Glu Ala Ile Ser Pro Pro Asp
 900 905 910
 Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg
 915 920 925
 Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu Arg Gly Lys Leu Lys Leu
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 Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp
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<210> 396
 <211> 762
 <212> PRT
 <213> Homo sapiens

<400> 396
 Met Leu Thr Val Ala Leu Leu Ala Leu Leu Cys Ala Ser Ala Ser Gly
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Asn Ala Ile Gln Ala Arg Ser Ser Ser Tyr Ser Gly Glu Tyr Gly Gly
 20 25 30
 Gly Gly Gly Lys Arg Phe Ser His Ser Gly Asn Gln Leu Asp Gly Pro
 35 40 45
 Ile Thr Ala Leu Arg Val Arg Val Asn Thr Tyr Tyr Ile Val Gly Leu
 50 55 60
 Gln Val Arg Tyr Gly Lys Val Trp Ser Asp Tyr Val Gly Gly Arg Asn
 65 70 75 80
 Gly Asp Leu Glu Glu Ile Phe Leu His Pro Gly Glu Ser Val Ile Gln
 85 90 95
 Val Ser Gly Lys Tyr Lys Trp Tyr Leu Lys Lys Leu Val Phe Val Thr
 100 105 110
 Asp Lys Gly Arg Tyr Leu Ser Phe Gly Lys Asp Ser Gly Thr Ser Phe
 115 120 125
 Asn Ala Val Pro Leu His Pro Asn Thr Val Leu Arg Phe Ile Ser Gly
 130 135 140
 Arg Ser Gly Ser Leu Ile Asp Ala Ile Gly Leu His Trp Asp Val Tyr
 145 150 155 160
 Pro Thr Ser Cys Ser Arg Cys Asp Ala His Lys Ser Glu Val Ala His
 165 170 175
 Arg Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly
 180 185 190
 Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu
 195 200 205
 Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr
 210 215 220
 Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp
 225 230 235 240
 Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr
 245 250 255
 Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu
 260 265 270
 Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn
 275 280 285
 Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe
 290 295 300
 His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala
 305 310 315 320
 Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys
 325 330 335
 Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala
 340 345 350

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Cys | Leu | Leu | Pro | Lys | Leu | Asp | Glu | Leu | Arg | Asp | Glu | Gly | Lys | Ala |
| | | 355 | | | | | 360 | | | | | 365 | | | |
| Ser | Ser | Ala | Lys | Gln | Arg | Leu | Lys | Cys | Ala | Ser | Leu | Gln | Lys | Phe | Gly |
| | | 370 | | | | 375 | | | | | 380 | | | | |
| Glu | Arg | Ala | Phe | Lys | Ala | Trp | Ala | Val | Ala | Arg | Leu | Ser | Gln | Arg | Phe |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Pro | Lys | Ala | Glu | Phe | Ala | Glu | Val | Ser | Lys | Leu | Val | Thr | Asp | Leu | Thr |
| | | | | 405 | | | | | 410 | | | | | 415 | |
| Lys | Val | His | Thr | Glu | Cys | Cys | His | Gly | Asp | Leu | Leu | Glu | Cys | Ala | Asp |
| | | | 420 | | | | | 425 | | | | | 430 | | |
| Asp | Arg | Ala | Asp | Leu | Ala | Lys | Tyr | Ile | Cys | Glu | Asn | Gln | Asp | Ser | Ile |
| | | 435 | | | | | 440 | | | | | 445 | | | |
| Ser | Ser | Lys | Leu | Lys | Glu | Cys | Cys | Glu | Lys | Pro | Leu | Leu | Glu | Lys | Ser |
| | | 450 | | | | 455 | | | | | 460 | | | | |
| His | Cys | Ile | Ala | Glu | Val | Glu | Asn | Asp | Glu | Met | Pro | Ala | Asp | Leu | Pro |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 |
| Ser | Leu | Ala | Ala | Asp | Phe | Val | Glu | Ser | Lys | Asp | Val | Cys | Lys | Asn | Tyr |
| | | | | 485 | | | | | 490 | | | | | 495 | |
| Ala | Glu | Ala | Lys | Asp | Val | Phe | Leu | Gly | Met | Phe | Leu | Tyr | Glu | Tyr | Ala |
| | | | 500 | | | | | 505 | | | | | 510 | | |
| Arg | Arg | His | Pro | Asp | Tyr | Ser | Val | Val | Leu | Leu | Leu | Arg | Leu | Ala | Lys |
| | | 515 | | | | | 520 | | | | | 525 | | | |
| Thr | Tyr | Glu | Thr | Thr | Leu | Glu | Lys | Cys | Cys | Ala | Ala | Ala | Asp | Pro | His |
| | | 530 | | | | 535 | | | | | | 540 | | | |
| Glu | Cys | Tyr | Ala | Lys | Val | Phe | Asp | Glu | Phe | Lys | Pro | Leu | Val | Glu | Glu |
| 545 | | | | | 550 | | | | | 555 | | | | | 560 |
| Pro | Gln | Asn | Leu | Ile | Lys | Gln | Asn | Cys | Glu | Leu | Phe | Glu | Gln | Leu | Gly |
| | | | | 565 | | | | | 570 | | | | | 575 | |
| Glu | Tyr | Lys | Phe | Gln | Asn | Ala | Leu | Leu | Val | Arg | Tyr | Thr | Lys | Lys | Val |
| | | | 580 | | | | | 585 | | | | | 590 | | |
| Pro | Gln | Val | Ser | Thr | Pro | Thr | Leu | Val | Glu | Val | Ser | Arg | Asn | Leu | Gly |
| | | 595 | | | | | 600 | | | | | 605 | | | |
| Lys | Val | Gly | Ser | Lys | Cys | Cys | Lys | His | Pro | Glu | Ala | Lys | Arg | Met | Pro |
| | | 610 | | | | 615 | | | | | 620 | | | | |
| Cys | Ala | Glu | Asp | Tyr | Leu | Ser | Val | Val | Leu | Asn | Gln | Leu | Cys | Val | Leu |
| 625 | | | | | 630 | | | | | 635 | | | | | 640 |
| His | Glu | Lys | Thr | Pro | Val | Ser | Asp | Arg | Val | Thr | Lys | Cys | Cys | Thr | Glu |
| | | | | 645 | | | | | 650 | | | | | 655 | |
| Ser | Leu | Val | Asn | Arg | Arg | Pro | Cys | Phe | Ser | Ala | Leu | Glu | Val | Asp | Glu |
| | | | 660 | | | | | 665 | | | | | 670 | | |
| Thr | Tyr | Val | Pro | Lys | Glu | Phe | Asn | Ala | Glu | Thr | Phe | Thr | Phe | His | Ala |
| | | 675 | | | | | 680 | | | | | 685 | | | |

Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr
 690 695 700
 Ala Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln
 705 710 715 720
 Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys
 725 730 735
 Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu
 740 745 750
 Val Ala Ala Ser Gln Ala Ala Leu Gly Leu
 755 760

<210> 397
 <211> 835
 <212> PRT
 <213> Homo sapiens

<400> 397
 Met Arg Phe Pro Ser Ile Phe Thr Ala Val Leu Phe Ala Ala Ser Ser
 1 5 10 15
 Ala Leu Ala Ala Pro Val Asn Thr Thr Thr Glu Asp Glu Thr Ala Gln
 20 25 30
 Ile Pro Ala Glu Ala Val Ile Gly Tyr Ser Asp Leu Glu Gly Asp Phe
 35 40 45
 Asp Val Ala Val Leu Pro Phe Ser Asn Ser Thr Asn Asn Gly Leu Leu
 50 55 60
 Phe Ile Asn Thr Thr Ile Ala Ser Ile Ala Ala Lys Glu Glu Gly Val
 65 70 75 80
 Ser Leu Asp Lys Arg Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser
 85 90 95
 Arg Arg Thr Leu Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe
 100 105 110
 Ser Cys Leu Lys Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe
 115 120 125
 Gly Asn Gln Phe Gln Lys Ala Glu Thr Ile Pro Val Leu His Glu Met
 130 135 140
 Ile Gln Gln Ile Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala
 145 150 155 160
 Trp Asp Glu Thr Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln
 165 170 175
 Leu Asn Asp Leu Glu Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu
 180 185 190
 Thr Pro Leu Met Lys Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe
 195 200 205
 Gln Arg Ile Thr Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala

| 210 | 215 | 220 |
|---|-----|-------------|
| Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr | | |
| 225 | 230 | 235 240 |
| Asn Leu Gln Glu Ser Leu Arg Ser Lys Glu Asp Ala His Lys Ser Glu | | |
| | 245 | 250 255 |
| Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu | | |
| | 260 | 265 270 |
| Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp | | |
| | 275 | 280 285 |
| His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val | | |
| | 290 | 295 300 |
| Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe | | |
| | 305 | 310 315 320 |
| Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu | | |
| | 325 | 330 335 |
| Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe | | |
| | 340 | 345 350 |
| Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro | | |
| | 355 | 360 365 |
| Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe | | |
| | 370 | 375 380 |
| Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr | | |
| | 385 | 390 395 400 |
| Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr | | |
| | 405 | 410 415 |
| Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu | | |
| | 420 | 425 430 |
| Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu | | |
| | 435 | 440 445 |
| Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp | | |
| | 450 | 455 460 |
| Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu | | |
| | 465 | 470 475 480 |
| Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys | | |
| | 485 | 490 495 |
| His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys | | |
| | 500 | 505 510 |
| Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys | | |
| | 515 | 520 525 |
| Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu | | |
| | 530 | 535 540 |
| Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val | | |

| | | | | | | |
|---|-----|-----|-----|-----|-----|-----|
| 545 | | 550 | | 555 | | 560 |
| Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe | | | | | | |
| | 565 | | | 570 | | 575 |
| Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser | | | | | | |
| | 580 | | 585 | | 590 | |
| Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu | | | | | | |
| | 595 | | 600 | | 605 | |
| Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe | | | | | | |
| | 610 | | 615 | | 620 | |
| Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln | | | | | | |
| | 625 | | 630 | | 635 | 640 |
| Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala | | | | | | |
| | | 645 | | 650 | | 655 |
| Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr | | | | | | |
| | 660 | | 665 | | 670 | |
| Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys | | | | | | |
| | 675 | | 680 | | 685 | |
| Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser | | | | | | |
| | 690 | | 695 | | 700 | |
| Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser | | | | | | |
| | 705 | | 710 | | 715 | 720 |
| Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro | | | | | | |
| | 725 | | 730 | | 735 | |
| Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe | | | | | | |
| | 740 | | 745 | | 750 | |
| Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu | | | | | | |
| | 755 | | 760 | | 765 | |
| Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys | | | | | | |
| | 770 | | 775 | | 780 | |
| His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp | | | | | | |
| | 785 | | 790 | | 795 | 800 |
| Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr | | | | | | |
| | 805 | | 810 | | 815 | |
| Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala | | | | | | |
| | 820 | | 825 | | 830 | |
| Leu Gly Leu | | | | | | |
| | 835 | | | | | |

<210> 398
 <211> 716
 <212> PRT
 <213> Homo sapiens

<400> 398

Met Lys Val Ser Val Ala Ala Leu Ser Cys Leu Met Leu Val Thr Ala
1 5 10 15
Leu Gly Ser Gln Ala Ser Ala Gly Ala Gly Ser His Cys Gln Lys Thr
20 25 30
Ser Leu Arg Val Asn Phe Glu Asp Ile Gly Trp Asp Ser Trp Ile Ile
35 40 45
Ala Pro Lys Glu Tyr Glu Ala Tyr Glu Cys Lys Gly Gly Cys Phe Phe
50 55 60
Pro Leu Ala Asp Asp Val Thr Pro Thr Lys His Ala Ile Val Gln Thr
65 70 75 80
Leu Val His Leu Lys Phe Pro Thr Lys Val Gly Lys Ala Cys Cys Val
85 90 95
Pro Thr Lys Leu Ser Pro Ile Ser Val Leu Tyr Lys Asp Asp Met Gly
100 105 110
Val Pro Thr Leu Lys Tyr His Tyr Glu Gly Met Ser Val Ala Glu Cys
115 120 125
Gly Cys Arg Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp
130 135 140
Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln
145 150 155 160
Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu
165 170 175
Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn
180 185 190
Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val
195 200 205
Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys
210 215 220
Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn
225 230 235 240
Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr
245 250 255
Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu
260 265 270
Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe
275 280 285
Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp
290 295 300
Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly
305 310 315 320
Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys
325 330 335

Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln
340 345 350
Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp
355 360 365
Leu Thr Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys
370 375 380
Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp
385 390 395 400
Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu
405 410 415
Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp
420 425 430
Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys
435 440 445
Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu
450 455 460
Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu
465 470 475 480
Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp
485 490 495
Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val
500 505 510
Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln
515 520 525
Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys
530 535 540
Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn
545 550 555 560
Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg
565 570 575
Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys
580 585 590
Val Leu His Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys
595 600 605
Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val
610 615 620
Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe
625 630 635 640
His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys
645 650 655
Gln Thr Ala Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys
660 665 670

Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys
675 680 685

Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys
690 695 700

Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly Leu
705 710 715

<210> 399
<211> 1014
<212> PRT
<213> Homo sapiens

<400> 399
Met Cys Pro Gly Ala Leu Trp Val Ala Leu Pro Leu Leu Ser Leu Leu
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Ala Gly Ser Leu Gln Gly Lys Pro Leu Gln Ser Trp Gly Arg Gly Ser
20 25 30

Ala Gly Gly Asn Ala His Ser Pro Leu Gly Val Pro Gly Gly Gly Leu
35 40 45

Pro Glu His Thr Phe Asn Leu Lys Met Phe Leu Glu Asn Val Lys Val
50 55 60

Asp Phe Leu Arg Ser Leu Asn Leu Ser Gly Val Pro Ser Gln Asp Lys
65 70 75 80

Thr Arg Val Glu Pro Pro Gln Tyr Met Ile Asp Leu Tyr Asn Arg Tyr
85 90 95

Thr Ser Asp Lys Ser Thr Thr Pro Ala Ser Asn Ile Val Arg Ser Phe
100 105 110

Ser Met Glu Asp Ala Ile Ser Ile Thr Ala Thr Glu Asp Phe Pro Phe
115 120 125

Gln Lys His Ile Leu Leu Phe Asn Ile Ser Ile Pro Arg His Glu Gln
130 135 140

Ile Thr Arg Ala Glu Leu Arg Leu Tyr Val Ser Cys Gln Asn His Val
145 150 155 160

Asp Pro Ser His Asp Leu Lys Gly Ser Val Val Ile Tyr Asp Val Leu
165 170 175

Asp Gly Thr Asp Ala Trp Asp Ser Ala Thr Glu Thr Lys Thr Phe Leu
180 185 190

Val Ser Gln Asp Ile Gln Asp Glu Gly Trp Glu Thr Leu Glu Val Ser
195 200 205

Ser Ala Val Lys Arg Trp Val Arg Ser Asp Ser Thr Lys Ser Lys Asn
210 215 220

Lys Leu Glu Val Thr Val Glu Ser His Arg Lys Gly Cys Asp Thr Leu
225 230 235 240

Asp Ile Ser Val Pro Pro Gly Ser Arg Asn Leu Pro Phe Phe Val Val
 245 250 255
 Phe Ser Asn Asp His Ser Ser Gly Thr Lys Glu Thr Arg Leu Glu Leu
 260 265 270
 Arg Glu Met Ile Ser His Glu Gln Glu Ser Val Leu Lys Lys Leu Ser
 275 280 285
 Lys Asp Gly Ser Thr Glu Ala Gly Glu Ser Ser His Glu Glu Asp Thr
 290 295 300
 Asp Gly His Val Ala Ala Gly Ser Thr Leu Ala Arg Arg Lys Arg Ser
 305 310 315 320
 Ala Gly Ala Gly Ser His Cys Gln Lys Thr Ser Leu Arg Val Asn Phe
 325 330 335
 Glu Asp Ile Gly Trp Asp Ser Trp Ile Ile Ala Pro Lys Glu Tyr Glu
 340 345 350
 Ala Tyr Glu Cys Lys Gly Gly Cys Phe Phe Pro Leu Ala Asp Asp Val
 355 360 365
 Thr Pro Thr Lys His Ala Ile Val Gln Thr Leu Val His Leu Lys Phe
 370 375 380
 Pro Thr Lys Val Gly Lys Ala Cys Cys Val Pro Thr Lys Leu Ser Pro
 385 390 395 400
 Ile Ser Val Leu Tyr Lys Asp Asp Met Gly Val Pro Thr Leu Lys Tyr
 405 410 415
 His Tyr Glu Gly Met Ser Val Ala Glu Cys Gly Cys Arg Asp Ala His
 420 425 430
 Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe
 435 440 445
 Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro
 450 455 460
 Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys
 465 470 475 480
 Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His
 485 490 495
 Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr
 500 505 510
 Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn
 515 520 525
 Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu
 530 535 540
 Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu
 545 550 555 560
 Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro
 565 570 575

Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala
580 585 590
Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu
595 600 605
Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys
610 615 620
Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe
625 630 635 640
Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu
645 650 655
Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr
660 665 670
Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp
675 680 685
Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu
690 695 700
Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala
705 710 715 720
Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala
725 730 735
Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys
740 745 750
Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro
755 760 765
Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr
770 775 780
Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala
785 790 795 800
Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu
805 810 815
Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe
820 825 830
Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser
835 840 845
Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser
850 855 860
Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp
865 870 875 880
Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr
885 890 895
Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn
900 905 910

Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro
 915 920 925
 Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr
 930 935 940
 Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu
 945 950 955 960
 Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val
 965 970 975
 Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp
 980 985 990
 Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser
 995 1000 1005
 Gln Ala Ala Leu Gly Leu
 1010

<210> 400
 <211> 1014
 <212> PRT
 <213> Homo sapiens

<400> 400
 Met Cys Pro Gly Ala Leu Trp Val Ala Leu Pro Leu Leu Ser Leu Leu
 1 5 10 15
 Ala Gly Ser Leu Gln Gly Lys Pro Leu Gln Ser Trp Gly Arg Gly Ser
 20 25 30
 Ala Gly Gly Asn Ala His Ser Pro Leu Gly Val Pro Gly Gly Gly Leu
 35 40 45
 Pro Glu His Thr Phe Asn Leu Lys Met Phe Leu Glu Asn Val Lys Val
 50 55 60
 Asp Phe Leu Arg Ser Leu Asn Leu Ser Gly Val Pro Ser Gln Asp Lys
 65 70 75 80
 Thr Arg Val Glu Pro Pro Gln Tyr Met Ile Asp Leu Tyr Asn Arg Tyr
 85 90 95
 Thr Ser Asp Lys Ser Thr Thr Pro Ala Ser Asn Ile Val Arg Ser Phe
 100 105 110
 Ser Met Glu Asp Ala Ile Ser Ile Thr Ala Thr Glu Asp Phe Pro Phe
 115 120 125
 Gln Lys His Ile Leu Leu Phe Asn Ile Ser Ile Pro Arg His Glu Gln
 130 135 140
 Ile Thr Arg Ala Glu Leu Arg Leu Tyr Val Ser Cys Gln Asn His Val
 145 150 155 160
 Asp Pro Ser His Asp Leu Lys Gly Ser Val Val Ile Tyr Asp Val Leu
 165 170 175
 Asp Gly Thr Asp Ala Trp Asp Ser Ala Thr Glu Thr Lys Thr Phe Leu

| 180 | | | | | 185 | | | | | 190 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ser | Gln | Asp | Ile | Gln | Asp | Glu | Gly | Trp | Glu | Thr | Leu | Glu | Val | Ser |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Ser | Ala | Val | Lys | Arg | Trp | Val | Arg | Ser | Asp | Ser | Thr | Lys | Ser | Lys | Asn |
| | | 210 | | | | | 215 | | | | | 220 | | | |
| Lys | Leu | Glu | Val | Thr | Val | Glu | Ser | His | Arg | Lys | Gly | Cys | Asp | Thr | Leu |
| | | 225 | | | | | 230 | | | | | 235 | | | |
| Asp | Ile | Ser | Val | Pro | Pro | Gly | Ser | Arg | Asn | Leu | Pro | Phe | Phe | Val | Val |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Phe | Ser | Asn | Asp | His | Ser | Ser | Gly | Thr | Lys | Glu | Thr | Arg | Leu | Glu | Leu |
| | | | | 260 | | | | | 265 | | | | | 270 | |
| Arg | Glu | Met | Ile | Ser | His | Glu | Gln | Glu | Ser | Val | Leu | Lys | Lys | Leu | Ser |
| | | | | 275 | | | | | 280 | | | | | 285 | |
| Lys | Asp | Gly | Ser | Thr | Glu | Ala | Gly | Glu | Ser | Ser | His | Glu | Glu | Asp | Thr |
| | | | | 290 | | | | | 295 | | | | | 300 | |
| Asp | Gly | His | Val | Ala | Ala | Gly | Ser | Thr | Leu | Ala | Arg | Arg | Lys | Arg | Ser |
| | | | | 305 | | | | | 310 | | | | | 315 | |
| Ala | Gly | Ala | Gly | Ser | His | Cys | Gln | Lys | Thr | Ser | Leu | Arg | Val | Asn | Phe |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Glu | Asp | Ile | Gly | Trp | Asp | Ser | Trp | Ile | Ile | Ala | Pro | Lys | Glu | Tyr | Glu |
| | | | | 340 | | | | | 345 | | | | | 350 | |
| Ala | Tyr | Glu | Cys | Lys | Gly | Gly | Cys | Phe | Phe | Pro | Leu | Ala | Asp | Asp | Val |
| | | | | 355 | | | | | 360 | | | | | 365 | |
| Thr | Pro | Thr | Lys | His | Ala | Ile | Val | Gln | Thr | Leu | Val | His | Leu | Lys | Phe |
| | | | | 370 | | | | | 375 | | | | | 380 | |
| Pro | Thr | Lys | Val | Gly | Lys | Ala | Cys | Cys | Val | Pro | Thr | Lys | Leu | Ser | Pro |
| | | | | 385 | | | | | 390 | | | | | 395 | |
| Ile | Ser | Val | Leu | Tyr | Lys | Asp | Asp | Met | Gly | Val | Pro | Thr | Leu | Lys | Tyr |
| | | | | 405 | | | | | 410 | | | | | 415 | |
| His | Tyr | Glu | Gly | Met | Ser | Val | Ala | Glu | Cys | Gly | Cys | Arg | Asp | Ala | His |
| | | | | 420 | | | | | 425 | | | | | 430 | |
| Lys | Ser | Glu | Val | Ala | His | Arg | Phe | Lys | Asp | Leu | Gly | Glu | Glu | Asn | Phe |
| | | | | 435 | | | | | 440 | | | | | 445 | |
| Lys | Ala | Leu | Val | Leu | Ile | Ala | Phe | Ala | Gln | Tyr | Leu | Gln | Gln | Cys | Pro |
| | | | | 450 | | | | | 455 | | | | | 460 | |
| Phe | Glu | Asp | His | Val | Lys | Leu | Val | Asn | Glu | Val | Thr | Glu | Phe | Ala | Lys |
| | | | | 465 | | | | | 470 | | | | | 475 | |
| Thr | Cys | Val | Ala | Asp | Glu | Ser | Ala | Glu | Asn | Cys | Asp | Lys | Ser | Leu | His |
| | | | | 485 | | | | | 490 | | | | | 495 | |
| Thr | Leu | Phe | Gly | Asp | Lys | Leu | Cys | Thr | Val | Ala | Thr | Leu | Arg | Glu | Thr |
| | | | | 500 | | | | | 505 | | | | | 510 | |
| Tyr | Gly | Glu | Met | Ala | Asp | Cys | Cys | Ala | Lys | Gln | Glu | Pro | Glu | Arg | Asn |

| 515 | | | | | 520 | | | | | 525 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Cys | Phe | Leu | Gln | His | Lys | Asp | Asp | Asn | Pro | Asn | Leu | Pro | Arg | Leu |
| 530 | | | | | | 535 | | | | | 540 | | | | |
| Val | Arg | Pro | Glu | Val | Asp | Val | Met | Cys | Thr | Ala | Phe | His | Asp | Asn | Glu |
| 545 | | | | | 550 | | | | | 555 | | | | | 560 |
| Glu | Thr | Phe | Leu | Lys | Lys | Tyr | Leu | Tyr | Glu | Ile | Ala | Arg | Arg | His | Pro |
| | | | | 565 | | | | | 570 | | | | | 575 | |
| Tyr | Phe | Tyr | Ala | Pro | Glu | Leu | Leu | Phe | Phe | Ala | Lys | Arg | Tyr | Lys | Ala |
| | | | 580 | | | | | 585 | | | | | 590 | | |
| Ala | Phe | Thr | Glu | Cys | Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala | Cys | Leu | Leu |
| | | 595 | | | | | 600 | | | | | 605 | | | |
| Pro | Lys | Leu | Asp | Glu | Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser | Ser | Ala | Lys |
| | 610 | | | | | 615 | | | | | 620 | | | | |
| Gln | Arg | Leu | Lys | Cys | Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe |
| 625 | | | | | 630 | | | | | 635 | | | | | 640 |
| Lys | Ala | Trp | Ala | Val | Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu |
| | | | | 645 | | | | | 650 | | | | | 655 | |
| Phe | Ala | Glu | Val | Ser | Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | Val | His | Thr |
| | | | 660 | | | | | 665 | | | | | 670 | | |
| Glu | Cys | Cys | His | Gly | Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | Arg | Ala | Asp |
| | | 675 | | | | | 680 | | | | | 685 | | | |
| Leu | Ala | Lys | Tyr | Ile | Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu |
| | 690 | | | | | 695 | | | | | 700 | | | | |
| Lys | Glu | Cys | Cys | Glu | Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | Cys | Ile | Ala |
| 705 | | | | | 710 | | | | | 715 | | | | | 720 |
| Glu | Val | Glu | Asn | Asp | Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | Leu | Ala | Ala |
| | | | | 725 | | | | | 730 | | | | | 735 | |
| Asp | Phe | Val | Glu | Ser | Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys |
| | | | 740 | | | | | 745 | | | | | 750 | | |
| Asp | Val | Phe | Leu | Gly | Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | Arg | His | Pro |
| | | 755 | | | | | 760 | | | | | 765 | | | |
| Asp | Tyr | Ser | Val | Val | Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | Tyr | Glu | Thr |
| | 770 | | | | | 775 | | | | | 780 | | | | |
| Thr | Leu | Glu | Lys | Cys | Cys | Ala | Ala | Ala | Asp | Pro | His | Glu | Cys | Tyr | Ala |
| 785 | | | | | 790 | | | | | 795 | | | | | 800 |
| Lys | Val | Phe | Asp | Glu | Phe | Lys | Pro | Leu | Val | Glu | Glu | Pro | Gln | Asn | Leu |
| | | | | 805 | | | | | 810 | | | | | 815 | |
| Ile | Lys | Gln | Asn | Cys | Glu | Leu | Phe | Glu | Gln | Leu | Gly | Glu | Tyr | Lys | Phe |
| | | | 820 | | | | | 825 | | | | | 830 | | |
| Gln | Asn | Ala | Leu | Leu | Val | Arg | Tyr | Thr | Lys | Lys | Val | Pro | Gln | Val | Ser |
| | | 835 | | | | | 840 | | | | | 845 | | | |
| Thr | Pro | Thr | Leu | Val | Glu | Val | Ser | Arg | Asn | Leu | Gly | Lys | Val | Gly | Ser |

| | | |
|---|-----|-------------|
| 850 | 855 | 860 |
| Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp | | |
| 865 | 870 | 875 880 |
| Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr | | |
| | 885 | 890 895 |
| Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn | | |
| | 900 | 905 910 |
| Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro | | |
| | 915 | 920 925 |
| Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr | | |
| | 930 | 935 940 |
| Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu | | |
| | 945 | 950 955 960 |
| Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val | | |
| | 965 | 970 975 |
| Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp | | |
| | 980 | 985 990 |
| Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser | | |
| | 995 | 1000 1005 |
| Gln Ala Ala Leu Gly Leu | | |
| 1010 | | |

<210> 401
 <211> 954
 <212> PRT
 <213> Homo sapiens

<400> 401
 Met Ala Gly Pro Ala Thr Gln Ser Pro Met Lys Leu Met Ala Leu Gln
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 20 25 30
 Leu Gly Pro Ala Ser Ser Leu Pro Gln Ser Phe Leu Leu Lys Cys Leu
 35 40 45
 Glu Gln Val Arg Lys Ile Gln Gly Asp Gly Ala Ala Leu Gln Glu Lys
 50 55 60
 Leu Cys Ala Thr Tyr Lys Leu Cys His Pro Glu Glu Leu Val Leu Leu
 65 70 75 80
 Gly His Ser Leu Gly Ile Pro Trp Ala Pro Leu Ser Ser Cys Pro Ser
 85 90 95
 Gln Ala Leu Gln Leu Ala Gly Cys Leu Ser Gln Leu His Ser Gly Leu
 100 105 110
 Phe Leu Tyr Gln Gly Leu Leu Gln Ala Leu Glu Gly Ile Ser Pro Glu
 115 120 125

Leu Gly Pro Thr Leu Asp Thr Leu Gln Leu Asp Val Ala Asp Phe Ala
 130 135 140
 Thr Thr Ile Trp Gln Gln Met Glu Glu Leu Gly Met Ala Pro Ala Leu
 145 150 155 160
 Gln Pro Thr Gln Gly Ala Met Pro Ala Phe Ala Ser Ala Phe Gln Arg
 165 170 175
 Arg Ala Gly Gly Val Leu Val Ala Ser His Leu Gln Ser Phe Leu Glu
 180 185 190
 Val Ser Tyr Arg Val Leu Arg His Leu Ala Gln Pro Asp Ala His Lys
 195 200 205
 Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys
 210 215 220
 Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe
 225 230 235 240
 Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr
 245 250 255
 Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr
 260 265 270
 Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr
 275 280 285
 Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu
 290 295 300
 Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val
 305 310 315 320
 Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu
 325 330 335
 Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr
 340 345 350
 Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala
 355 360 365
 Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro
 370 375 380
 Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln
 385 390 395 400
 Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys
 405 410 415
 Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe
 420 425 430
 Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu
 435 440 445
 Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu
 450 455 460

Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys
 465 470 475 480
 Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu
 485 490 495
 Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp
 500 505 510
 Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp
 515 520 525
 Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp
 530 535 540
 Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr
 545 550 555 560
 Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys
 565 570 575
 Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile
 580 585 590
 Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln
 595 600 605
 Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr
 610 615 620
 Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys
 625 630 635 640
 Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr
 645 650 655
 Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro
 660 665 670
 Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg
 675 680 685
 Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys
 690 695 700
 Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu
 705 710 715 720
 Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu
 725 730 735
 Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met
 740 745 750
 Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys
 755 760 765
 Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln
 770 775 780
 Ala Ala Leu Gly Leu Ala Pro Pro Arg Leu Ile Cys Asp Ser Arg Val
 785 790 795 800

Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu Ala Glu Asn Ile Thr Thr
 805 810 815
 Gly Cys Ala Glu His Cys Ser Leu Asn Glu Asn Ile Thr Val Pro Asp
 820 825 830
 Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg Met Glu Val Gly Gln Gln
 835 840 845
 Ala Val Glu Val Trp Gln Gly Leu Ala Leu Leu Ser Glu Ala Val Leu
 850 855 860
 Arg Gly Gln Ala Leu Leu Val Asn Ser Ser Gln Pro Trp Glu Pro Leu
 865 870 875 880
 Gln Leu His Val Asp Lys Ala Val Ser Gly Leu Arg Ser Leu Thr Thr
 885 890 895
 Leu Leu Arg Ala Leu Gly Ala Gln Lys Glu Ala Ile Ser Pro Pro Asp
 900 905 910
 Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile Thr Ala Asp Thr Phe Arg
 915 920 925
 Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu Arg Gly Lys Leu Lys Leu
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 Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp
 945 950

<210> 402
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 <212> PRT
 <213> Homo sapiens

<400> 402
 Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
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 His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
 35 40 45
 Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
 50 55 60
 Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
 65 70 75 80
 Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
 85 90 95
 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
 100 105 110
 Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln
 115 120 125

His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
 130 135 140
 Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys
 145 150 155 160
 Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro
 165 170 175
 Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys
 180 185 190
 Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu
 195 200 205
 Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys
 210 215 220
 Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val
 225 230 235 240
 Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser
 245 250 255
 Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly
 260 265 270
 Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile
 275 280 285
 Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu
 290 295 300
 Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp
 305 310 315 320
 Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser
 325 330 335
 Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly
 340 345 350
 Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val
 355 360 365
 Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys
 370 375 380
 Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu
 385 390 395 400
 Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys
 405 410 415
 Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu
 420 425 430
 Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val
 435 440 445
 Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His
 450 455 460

Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val
 465 470 475 480
 Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg
 485 490 495
 Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe
 500 505 510
 Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala
 515 520 525
 Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu
 530 535 540
 Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys
 545 550 555 560
 Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala
 565 570 575
 Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe
 580 585 590
 Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
 595 600 605
 Leu Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg Thr Leu
 610 615 620
 Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys Leu Lys
 625 630 635 640
 Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn Gln Phe
 645 650 655
 Gln Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln Gln Ile
 660 665 670
 Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp Glu Thr
 675 680 685
 Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn Asp Leu
 690 695 700
 Glu Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro Leu Met
 705 710 715 720
 Lys Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg Ile Thr
 725 730 735
 Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu Val Val
 740 745 750
 Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu Gln Glu
 755 760 765
 Ser Leu Arg Ser Lys Glu
 770

<210> 403

<211> 773
 <212> PRT
 <213> Homo sapiens

<400> 403

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Met Ala Leu Thr Phe Ala Leu Leu Val Ala Leu Leu Val Leu Ser Cys
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Lys Ser Ser Cys Ser Val Gly Cys Asp Leu Pro Gln Thr His Ser Leu
      20          25          30

Gly Ser Arg Arg Thr Leu Met Leu Leu Ala Gln Met Arg Arg Ile Ser
      35          40          45

Leu Phe Ser Cys Leu Lys Asp Arg His Asp Phe Gly Phe Pro Gln Glu
      50          55          60

Glu Phe Gly Asn Gln Phe Gln Lys Ala Glu Thr Ile Pro Val Leu His
      65          70          75          80

Glu Met Ile Gln Gln Ile Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser
      85          90          95

Ala Ala Trp Asp Glu Thr Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr
      100          105          110

Gln Gln Leu Asn Asp Leu Glu Ala Cys Val Ile Gln Gly Val Gly Val
      115          120          125

Thr Glu Thr Pro Leu Met Lys Glu Asp Ser Ile Leu Ala Val Arg Lys
      130          135          140

Tyr Phe Gln Arg Ile Thr Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro
      145          150          155          160

Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Phe Ser Leu
      165          170          175

Ser Thr Asn Leu Gln Glu Ser Leu Arg Ser Lys Glu Asp Ala His Lys
      180          185          190

Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys
      195          200          205

Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe
      210          215          220

Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr
      225          230          235          240

Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr
      245          250          255

Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr
      260          265          270

Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu
      275          280          285

Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val
      290          295          300

Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu

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| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Thr | Phe | Leu | Lys | Lys | Tyr | Leu | Tyr | Glu | Ile | Ala | Arg | Arg | His | Pro | Tyr |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Phe | Tyr | Ala | Pro | Glu | Leu | Leu | Phe | Phe | Ala | Lys | Arg | Tyr | Lys | Ala | Ala |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Phe | Thr | Glu | Cys | Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala | Cys | Leu | Leu | Pro |
| | | 355 | | | | | 360 | | | | | 365 | | | |
| Lys | Leu | Asp | Glu | Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser | Ser | Ala | Lys | Gln |
| | 370 | | | | | 375 | | | | | 380 | | | | |
| Arg | Leu | Lys | Cys | Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe | Lys |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Ala | Trp | Ala | Val | Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu | Phe |
| | | | | 405 | | | | | 410 | | | | | 415 | |
| Ala | Glu | Val | Ser | Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | Val | His | Thr | Glu |
| | | | 420 | | | | | 425 | | | | | 430 | | |
| Cys | Cys | His | Gly | Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | Arg | Ala | Asp | Leu |
| | | 435 | | | | | 440 | | | | | 445 | | | |
| Ala | Lys | Tyr | Ile | Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu | Lys |
| | 450 | | | | | 455 | | | | | 460 | | | | |
| Glu | Cys | Cys | Glu | Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | Cys | Ile | Ala | Glu |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 |
| Val | Glu | Asn | Asp | Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | Leu | Ala | Ala | Asp |
| | | | | 485 | | | | | 490 | | | | | 495 | |
| Phe | Val | Glu | Ser | Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys | Asp |
| | | | 500 | | | | | 505 | | | | | 510 | | |
| Val | Phe | Leu | Gly | Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | Arg | His | Pro | Asp |
| | 515 | | | | | 520 | | | | | | 525 | | | |
| Tyr | Ser | Val | Val | Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | Tyr | Glu | Thr | Thr |
| | 530 | | | | | 535 | | | | | 540 | | | | |
| Leu | Glu | Lys | Cys | Cys | Ala | Ala | Ala | Asp | Pro | His | Glu | Cys | Tyr | Ala | Lys |
| 545 | | | | | 550 | | | | | 555 | | | | | 560 |
| Val | Phe | Asp | Glu | Phe | Lys | Pro | Leu | Val | Glu | Glu | Pro | Gln | Asn | Leu | Ile |
| | | | | 565 | | | | | 570 | | | | | 575 | |
| Lys | Gln | Asn | Cys | Glu | Leu | Phe | Glu | Gln | Leu | Gly | Glu | Tyr | Lys | Phe | Gln |
| | | | 580 | | | | | 585 | | | | | 590 | | |
| Asn | Ala | Leu | Leu | Val | Arg | Tyr | Thr | Lys | Lys | Val | Pro | Gln | Val | Ser | Thr |
| | 595 | | | | | | 600 | | | | | 605 | | | |
| Pro | Thr | Leu | Val | Glu | Val | Ser | Arg | Asn | Leu | Gly | Lys | Val | Gly | Ser | Lys |
| | 610 | | | | | 615 | | | | | 620 | | | | |
| Cys | Cys | Lys | His | Pro | Glu | Ala | Lys | Arg | Met | Pro | Cys | Ala | Glu | Asp | Tyr |
| 625 | | | | | 630 | | | | | 635 | | | | | 640 |
| Leu | Ser | Val | Val | Leu | Asn | Gln | Leu | Cys | Val | Leu | His | Glu | Lys | Thr | Pro |

| | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|
| | | | | 645 | | | | | | 650 | | | | | | 655 | | | |
| Val | Ser | Asp | Arg | Val | Thr | Lys | Cys | Cys | Thr | Glu | Ser | Leu | Val | Asn | Arg | | | | |
| | | | 660 | | | | | 665 | | | | | 670 | | | | | | |
| Arg | Pro | Cys | Phe | Ser | Ala | Leu | Glu | Val | Asp | Glu | Thr | Tyr | Val | Pro | Lys | | | | |
| | | 675 | | | | | 680 | | | | | 685 | | | | | | | |
| Glu | Phe | Asn | Ala | Glu | Thr | Phe | Thr | Phe | His | Ala | Asp | Ile | Cys | Thr | Leu | | | | |
| | 690 | | | | | 695 | | | | | 700 | | | | | | | | |
| Ser | Glu | Lys | Glu | Arg | Gln | Ile | Lys | Lys | Gln | Thr | Ala | Leu | Val | Glu | Leu | | | | |
| 705 | | | | | 710 | | | | | 715 | | | | | 720 | | | | |
| Val | Lys | His | Lys | Pro | Lys | Ala | Thr | Lys | Glu | Gln | Leu | Lys | Ala | Val | Met | | | | |
| | | | | 725 | | | | | 730 | | | | | 735 | | | | | |
| Asp | Asp | Phe | Ala | Ala | Phe | Val | Glu | Lys | Cys | Cys | Lys | Ala | Asp | Asp | Lys | | | | |
| | | 740 | | | | | | 745 | | | | | 750 | | | | | | |
| Glu | Thr | Cys | Phe | Ala | Glu | Glu | Gly | Lys | Lys | Leu | Val | Ala | Ala | Ser | Gln | | | | |
| | | 755 | | | | | 760 | | | | | 765 | | | | | | | |
| Ala | Ala | Leu | Gly | Leu | | | | | | | | | | | | | | | |
| | | 770 | | | | | | | | | | | | | | | | | |

<210> 404
 <211> 951
 <212> PRT
 <213> Homo sapiens

| | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| | | | | | | | | | | | | | | | | | | | |
| Met | Gly | Val | His | Glu | Cys | Pro | Ala | Trp | Leu | Trp | Leu | Leu | Leu | Ser | Leu | | | | |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | | | | | |
| Leu | Ser | Leu | Pro | Leu | Gly | Leu | Pro | Val | Leu | Gly | Ala | Pro | Pro | Arg | Leu | | | | |
| | | | 20 | | | | | 25 | | | | | | 30 | | | | | |
| Ile | Cys | Asp | Ser | Arg | Val | Leu | Glu | Arg | Tyr | Leu | Leu | Glu | Ala | Lys | Glu | | | | |
| | | 35 | | | | | 40 | | | | | 45 | | | | | | | |
| Ala | Glu | Asn | Ile | Thr | Thr | Gly | Cys | Ala | Glu | His | Cys | Ser | Leu | Asn | Glu | | | | |
| | 50 | | | | | 55 | | | | | 60 | | | | | | | | |
| Asn | Ile | Thr | Val | Pro | Asp | Thr | Lys | Val | Asn | Phe | Tyr | Ala | Trp | Lys | Arg | | | | |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 | | | | |
| Met | Glu | Val | Gly | Gln | Gln | Ala | Val | Glu | Val | Trp | Gln | Gly | Leu | Ala | Leu | | | | |
| | | | | 85 | | | | 90 | | | | | | 95 | | | | | |
| Leu | Ser | Glu | Ala | Val | Leu | Arg | Gly | Gln | Ala | Leu | Leu | Val | Asn | Ser | Ser | | | | |
| | | | 100 | | | | 105 | | | | | | 110 | | | | | | |
| Gln | Pro | Trp | Glu | Pro | Leu | Gln | Leu | His | Val | Asp | Lys | Ala | Val | Ser | Gly | | | | |
| | | 115 | | | | 120 | | | | | | 125 | | | | | | | |
| Leu | Arg | Ser | Leu | Thr | Thr | Leu | Leu | Arg | Ala | Leu | Gly | Ala | Gln | Lys | Glu | | | | |
| | 130 | | | | | 135 | | | | | 140 | | | | | | | | |
| Ala | Ile | Ser | Pro | Pro | Asp | Ala | Ala | Ser | Ala | Ala | Pro | Leu | Arg | Thr | Ile | | | | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | | | | |

Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu
 165 170 175
 Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp
 180 185 190
 Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu
 195 200 205
 Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln
 210 215 220
 Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu
 225 230 235 240
 Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys
 245 250 255
 Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu
 260 265 270
 Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro
 275 280 285
 Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu
 290 295 300
 Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His
 305 310 315 320
 Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg
 325 330 335
 Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg
 340 345 350
 Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala
 355 360 365
 Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser
 370 375 380
 Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu
 385 390 395 400
 Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro
 405 410 415
 Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys
 420 425 430
 Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp
 435 440 445
 Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser
 450 455 460
 Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His
 465 470 475 480
 Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser
 485 490 495

Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala
 500 505 510
 Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg
 515 520 525
 Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr
 530 535 540
 Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu
 545 550 555 560
 Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro
 565 570 575
 Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu
 580 585 590
 Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro
 595 600 605
 Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys
 610 615 620
 Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys
 625 630 635 640
 Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His
 645 650 655
 Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser
 660 665 670
 Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr
 675 680 685
 Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp
 690 695 700
 Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala
 705 710 715 720
 Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu
 725 730 735
 Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys
 740 745 750
 Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val
 755 760 765
 Ala Ala Ser Gln Ala Ala Leu Gly Leu Thr Pro Leu Gly Pro Ala Ser
 770 775 780
 Ser Leu Pro Gln Ser Phe Leu Leu Lys Cys Leu Glu Gln Val Arg Lys
 785 790 795 800
 Ile Gln Gly Asp Gly Ala Ala Leu Gln Glu Lys Leu Cys Ala Thr Tyr
 805 810 815
 Lys Leu Cys His Pro Glu Glu Leu Val Leu Leu Gly His Ser Leu Gly
 820 825 830

Ile Pro Trp Ala Pro Leu Ser Ser Cys Pro Ser Gln Ala Leu Gln Leu
 835 840 845
 Ala Gly Cys Leu Ser Gln Leu His Ser Gly Leu Phe Leu Tyr Gln Gly
 850 855 860
 Leu Leu Gln Ala Leu Glu Gly Ile Ser Pro Glu Leu Gly Pro Thr Leu
 865 870 875 880
 Asp Thr Leu Gln Leu Asp Val Ala Asp Phe Ala Thr Thr Ile Trp Gln
 885 890 895
 Gln Met Glu Glu Leu Gly Met Ala Pro Ala Leu Gln Pro Thr Gln Gly
 900 905 910
 Ala Met Pro Ala Phe Ala Ser Ala Phe Gln Arg Arg Ala Gly Gly Val
 915 920 925
 Leu Val Ala Ser His Leu Gln Ser Phe Leu Glu Val Ser Tyr Arg Val
 930 935 940
 Leu Arg His Leu Ala Gln Pro
 945 950

<210> 405
 <211> 908
 <212> PRT
 <213> Homo sapiens

<400> 405
 Met Asp Pro Ala Arg Lys Ala Gly Ala Gln Ala Met Ile Trp Thr Ala
 1 5 10 15
 Gly Trp Leu Leu Leu Leu Leu Arg Gly Gly Ala Gln Ala Leu Glu
 20 25 30
 Cys Tyr Ser Cys Val Gln Lys Ala Asp Asp Gly Cys Ser Pro Asn Lys
 35 40 45
 Met Lys Thr Val Lys Cys Ala Pro Gly Val Asp Val Cys Thr Glu Ala
 50 55 60
 Val Gly Ala Val Glu Thr Ile His Gly Gln Phe Ser Leu Ala Val Arg
 65 70 75 80
 Gly Cys Gly Ser Gly Leu Pro Gly Lys Asn Asp Arg Gly Leu Asp Leu
 85 90 95
 His Gly Leu Leu Ala Phe Ile Gln Leu Gln Gln Cys Ala Gln Asp Arg
 100 105 110
 Cys Asn Ala Lys Leu Asn Leu Thr Ser Arg Ala Leu Asp Pro Ala Gly
 115 120 125
 Asn Glu Ser Ala Tyr Pro Pro Asn Gly Val Glu Cys Tyr Ser Cys Val
 130 135 140
 Gly Leu Ser Arg Glu Ala Cys Gln Gly Thr Ser Pro Pro Val Val Ser
 145 150 155 160

Cys Tyr Asn Ala Ser Asp His Val Tyr Lys Gly Cys Phe Asp Gly Asn
 165 170 175
 Val Thr Leu Thr Ala Ala Asn Val Thr Val Ser Leu Pro Val Arg Gly
 180 185 190
 Cys Val Gln Asp Glu Phe Cys Thr Arg Asp Gly Val Thr Gly Pro Gly
 195 200 205
 Phe Thr Leu Ser Gly Ser Cys Cys Gln Gly Ser Arg Cys Asn Ser Asp
 210 215 220
 Leu Arg Asn Lys Thr Tyr Phe Ser Pro Arg Ile Pro Pro Leu Val Arg
 225 230 235 240
 Leu Pro Pro Pro Glu Pro Thr Thr Val Ala Ser Thr Thr Ser Val Thr
 245 250 255
 Thr Ser Thr Ser Ala Pro Val Arg Pro Thr Ser Thr Thr Lys Pro Met
 260 265 270
 Pro Ala Pro Thr Ser Gln Thr Pro Arg Gln Gly Val Glu His Glu Ala
 275 280 285
 Ser Arg Asp Glu Glu Pro Arg Leu Thr Gly Gly Ala Ala Gly His Gln
 290 295 300
 Asp Arg Ser Asn Ser Gly Gln Tyr Pro Ala Lys Gly Gly Pro Gln Gln
 305 310 315 320
 Pro His Asn Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp
 325 330 335
 Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln
 340 345 350
 Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu
 355 360 365
 Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn
 370 375 380
 Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val
 385 390 395 400
 Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys
 405 410 415
 Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn
 420 425 430
 Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr
 435 440 445
 Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu
 450 455 460
 Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe
 465 470 475 480
 Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp
 485 490 495

Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly
 500 505 510
 Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys
 515 520 525
 Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln
 530 535 540
 Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp
 545 550 555 560
 Leu Thr Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys
 565 570 575
 Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp
 580 585 590
 Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu
 595 600 605
 Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp
 610 615 620
 Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys
 625 630 635 640
 Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu
 645 650 655
 Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu
 660 665 670
 Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp
 675 680 685
 Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val
 690 695 700
 Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln
 705 710 715 720
 Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys
 725 730 735
 Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn
 740 745 750
 Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg
 755 760 765
 Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys
 770 775 780
 Val Leu His Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys
 785 790 795 800
 Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val
 805 810 815
 Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe
 820 825 830

His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys
 835 840 845
 Gln Thr Ala Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys
 850 855 860
 Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys
 865 870 875 880
 Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys
 885 890 895
 Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly Leu
 900 905

<210> 406
 <211> 908
 <212> PRT
 <213> Homo sapiens

<400> 406
 Met Asp Pro Ala Arg Lys Ala Gly Ala Gln Ala Met Ile Trp Thr Ala
 1 5 10 15
 Gly Trp Leu Leu Leu Leu Leu Arg Gly Gly Ala Gln Ala Leu Glu
 20 25 30
 Cys Tyr Ser Cys Val Gln Lys Ala Asp Asp Gly Cys Ser Pro Asn Lys
 35 40 45
 Met Lys Thr Val Lys Cys Ala Pro Gly Val Asp Val Cys Thr Glu Ala
 50 55 60
 Val Gly Ala Val Glu Thr Ile His Gly Gln Phe Ser Leu Ala Val Arg
 65 70 75 80
 Gly Cys Gly Ser Gly Leu Pro Gly Lys Asn Asp Arg Gly Leu Asp Leu
 85 90 95
 His Gly Leu Leu Ala Phe Ile Gln Leu Gln Gln Cys Ala Gln Asp Arg
 100 105 110
 Cys Asn Ala Lys Leu Asn Leu Thr Ser Arg Ala Leu Asp Pro Ala Gly
 115 120 125
 Asn Glu Ser Ala Tyr Pro Pro Asn Gly Val Glu Cys Tyr Ser Cys Val
 130 135 140
 Gly Leu Ser Arg Glu Ala Cys Gln Gly Thr Ser Pro Pro Val Val Ser
 145 150 155 160
 Cys Tyr Asn Ala Ser Asp His Val Tyr Lys Gly Cys Phe Asp Gly Asn
 165 170 175
 Val Thr Leu Thr Ala Ala Asn Val Thr Val Ser Leu Pro Val Arg Gly
 180 185 190
 Cys Val Gln Asp Glu Phe Cys Thr Arg Asp Gly Val Thr Gly Pro Gly
 195 200 205
 Phe Thr Leu Ser Gly Ser Cys Cys Gln Gly Ser Arg Cys Asn Ser Asp

| 210 | 215 | 220 |
|--|-----|-----|
| Leu Arg Asn Lys Thr Tyr Phe Ser Pro Arg Ile Pro Pro Leu Val Arg 225 230 235 240 | | |
| Leu Pro Pro Pro Glu Pro Thr Thr Val Ala Ser Thr Thr Ser Val Thr 245 250 255 | | |
| Thr Ser Thr Ser Ala Pro Val Arg Pro Thr Ser Thr Thr Lys Pro Met 260 265 270 | | |
| Pro Ala Pro Thr Ser Gln Thr Pro Arg Gln Gly Val Glu His Glu Ala 275 280 285 | | |
| Ser Arg Asp Glu Glu Pro Arg Leu Thr Gly Gly Ala Ala Gly His Gln 290 295 300 | | |
| Asp Arg Ser Asn Ser Gly Gln Tyr Pro Ala Lys Gly Gly Pro Gln Gln 305 310 315 320 | | |
| Pro His Asn Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp 325 330 335 | | |
| Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln 340 345 350 | | |
| Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu 355 360 365 | | |
| Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn 370 375 380 | | |
| Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val 385 390 395 400 | | |
| Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys 405 410 415 | | |
| Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn 420 425 430 | | |
| Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr 435 440 445 | | |
| Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu 450 455 460 | | |
| Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe 465 470 475 480 | | |
| Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp 485 490 495 | | |
| Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly 500 505 510 | | |
| Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys 515 520 525 | | |
| Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln 530 535 540 | | |
| Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp | | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 545 | | | | | 550 | | | | | | 555 | | | | 560 |
| Leu | Thr | Lys | Val | His | Thr | Glu | Cys | Cys | His | Gly | Asp | Leu | Leu | Glu | Cys |
| | | | | 565 | | | | | 570 | | | | | 575 | |
| Ala | Asp | Asp | Arg | Ala | Asp | Leu | Ala | Lys | Tyr | Ile | Cys | Glu | Asn | Gln | Asp |
| | | | 580 | | | | | 585 | | | | | 590 | | |
| Ser | Ile | Ser | Ser | Lys | Leu | Lys | Glu | Cys | Cys | Glu | Lys | Pro | Leu | Leu | Glu |
| | | 595 | | | | | 600 | | | | | 605 | | | |
| Lys | Ser | His | Cys | Ile | Ala | Glu | Val | Glu | Asn | Asp | Glu | Met | Pro | Ala | Asp |
| | 610 | | | | | 615 | | | | | 620 | | | | |
| Leu | Pro | Ser | Leu | Ala | Ala | Asp | Phe | Val | Glu | Ser | Lys | Asp | Val | Cys | Lys |
| 625 | | | | | 630 | | | | | 635 | | | | | 640 |
| Asn | Tyr | Ala | Glu | Ala | Lys | Asp | Val | Phe | Leu | Gly | Met | Phe | Leu | Tyr | Glu |
| | | | | 645 | | | | | 650 | | | | | 655 | |
| Tyr | Ala | Arg | Arg | His | Pro | Asp | Tyr | Ser | Val | Val | Leu | Leu | Leu | Arg | Leu |
| | | | 660 | | | | | 665 | | | | | 670 | | |
| Ala | Lys | Thr | Tyr | Glu | Thr | Thr | Leu | Glu | Lys | Cys | Cys | Ala | Ala | Ala | Asp |
| | | 675 | | | | | 680 | | | | | 685 | | | |
| Pro | His | Glu | Cys | Tyr | Ala | Lys | Val | Phe | Asp | Glu | Phe | Lys | Pro | Leu | Val |
| | 690 | | | | | 695 | | | | | 700 | | | | |
| Glu | Glu | Pro | Gln | Asn | Leu | Ile | Lys | Gln | Asn | Cys | Glu | Leu | Phe | Glu | Gln |
| 705 | | | | 710 | | | | | 715 | | | | | 720 | |
| Leu | Gly | Glu | Tyr | Lys | Phe | Gln | Asn | Ala | Leu | Leu | Val | Arg | Tyr | Thr | Lys |
| | | | | 725 | | | | | 730 | | | | | 735 | |
| Lys | Val | Pro | Gln | Val | Ser | Thr | Pro | Thr | Leu | Val | Glu | Val | Ser | Arg | Asn |
| | | | 740 | | | | | 745 | | | | | 750 | | |
| Leu | Gly | Lys | Val | Gly | Ser | Lys | Cys | Cys | Lys | His | Pro | Glu | Ala | Lys | Arg |
| | | 755 | | | | | 760 | | | | | 765 | | | |
| Met | Pro | Cys | Ala | Glu | Asp | Tyr | Leu | Ser | Val | Val | Leu | Asn | Gln | Leu | Cys |
| | 770 | | | | | 775 | | | | | 780 | | | | |
| Val | Leu | His | Glu | Lys | Thr | Pro | Val | Ser | Asp | Arg | Val | Thr | Lys | Cys | Cys |
| 785 | | | | | 790 | | | | | 795 | | | | | 800 |
| Thr | Glu | Ser | Leu | Val | Asn | Arg | Arg | Pro | Cys | Phe | Ser | Ala | Leu | Glu | Val |
| | | | | 805 | | | | | 810 | | | | | 815 | |
| Asp | Glu | Thr | Tyr | Val | Pro | Lys | Glu | Phe | Asn | Ala | Glu | Thr | Phe | Thr | Phe |
| | | | 820 | | | | | 825 | | | | | 830 | | |
| His | Ala | Asp | Ile | Cys | Thr | Leu | Ser | Glu | Lys | Glu | Arg | Gln | Ile | Lys | Lys |
| | | 835 | | | | | 840 | | | | | 845 | | | |
| Gln | Thr | Ala | Leu | Val | Glu | Leu | Val | Lys | His | Lys | Pro | Lys | Ala | Thr | Lys |
| | 850 | | | | | 855 | | | | | 860 | | | | |
| Glu | Gln | Leu | Lys | Ala | Val | Met | Asp | Asp | Phe | Ala | Ala | Phe | Val | Glu | Lys |
| 865 | | | | | 870 | | | | | 875 | | | | | 880 |
| Cys | Cys | Lys | Ala | Asp | Asp | Lys | Glu | Thr | Cys | Phe | Ala | Glu | Glu | Gly | Lys |

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 885 | | 890 | | 895 | | | | | | |
| Lys | Leu | Val | Ala | Ala | Ser | Gln | Ala | Ala | Leu | Gly | Leu |
| | 900 | | | | | | | 905 | | | |

<210> 407
 <211> 769
 <212> PRT
 <213> Homo sapiens

<400> 407
 Met Leu Leu Gln Ala Phe Leu Phe Leu Leu Ala Gly Phe Ala Ala Lys
 1 5 10 15
 Ile Ser Ala Cys Asp Leu Pro Gln Thr His Ser Leu Gly Ser Arg Arg
 20 25 30
 Thr Leu Met Leu Leu Ala Gln Met Arg Arg Ile Ser Leu Phe Ser Cys
 35 40 45
 Leu Lys Asp Arg His Asp Phe Gly Phe Pro Gln Glu Glu Phe Gly Asn
 50 55 60
 Gln Phe Gln Lys Ala Glu Thr Ile Pro Val Leu His Glu Met Ile Gln
 65 70 75 80
 Gln Ile Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser Ala Ala Trp Asp
 85 90 95
 Glu Thr Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr Gln Gln Leu Asn
 100 105 110
 Asp Leu Glu Ala Cys Val Ile Gln Gly Val Gly Val Thr Glu Thr Pro
 115 120 125
 Leu Met Lys Glu Asp Ser Ile Leu Ala Val Arg Lys Tyr Phe Gln Arg
 130 135 140
 Ile Thr Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro Cys Ala Trp Glu
 145 150 155 160
 Val Val Arg Ala Glu Ile Met Arg Ser Phe Ser Leu Ser Thr Asn Leu
 165 170 175
 Gln Glu Ser Leu Arg Ser Lys Glu Asp Ala His Lys Ser Glu Val Ala
 180 185 190
 His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
 195 200 205
 Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
 210 215 220
 Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
 225 230 235 240
 Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
 245 250 255
 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
 260 265 270

Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln
 275 280 285
 His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
 290 295 300
 Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys
 305 310 315 320
 Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro
 325 330 335
 Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys
 340 345 350
 Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu
 355 360 365
 Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys
 370 375 380
 Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val
 385 390 395 400
 Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser
 405 410 415
 Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly
 420 425 430
 Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile
 435 440 445
 Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu
 450 455 460
 Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp
 465 470 475 480
 Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser
 485 490 495
 Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly
 500 505 510
 Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val
 515 520 525
 Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys
 530 535 540
 Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu
 545 550 555 560
 Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys
 565 570 575
 Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu
 580 585 590
 Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val
 595 600 605

Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His
 610 615 620
 Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val
 625 630 635 640
 Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg
 645 650 655
 Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe
 660 665 670
 Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala
 675 680 685
 Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu
 690 695 700
 Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys
 705 710 715 720
 Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala
 725 730 735
 Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe
 740 745 750
 Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
 755 760 765

Leu

<210> 408
 <211> 669
 <212> PRT
 <213> Homo sapiens

<400> 408
 Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1 5 10 15
 Tyr Ser Gly Pro Tyr His Pro Ser Glu Cys Cys Phe Thr Tyr Thr Thr
 20 25 30
 Tyr Lys Ile Pro Arg Gln Arg Ile Met Asp Tyr Tyr Glu Thr Asn Ser
 35 40 45
 Gln Cys Ser Lys Pro Gly Ile Val Phe Ile Thr Lys Arg Gly His Ser
 50 55 60
 Val Cys Thr Asn Pro Ser Asp Lys Trp Val Gln Asp Tyr Ile Lys Asp
 65 70 75 80
 Met Lys Glu Asn Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys
 85 90 95
 Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala
 100 105 110

Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn
 115 120 125
 Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu
 130 135 140
 Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr
 145 150 155 160
 Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala
 165 170 175
 Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp
 180 185 190
 Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys
 195 200 205
 Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr
 210 215 220
 Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe
 225 230 235 240
 Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala
 245 250 255
 Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu
 260 265 270
 Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln
 275 280 285
 Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser
 290 295 300
 Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr
 305 310 315 320
 Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu
 325 330 335
 Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln
 340 345 350
 Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu
 355 360 365
 Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala
 370 375 380
 Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys
 385 390 395 400
 Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr
 405 410 415
 Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg
 420 425 430
 Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala
 435 440 445

Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu
 450 455 460
 Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu
 465 470 475 480
 Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr
 485 490 495
 Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg
 500 505 510
 Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys
 515 520 525
 Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu
 530 535 540
 Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys
 545 550 555 560
 Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu
 565 570 575
 Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr
 580 585 590
 Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys
 595 600 605
 Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr
 610 615 620
 Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu
 625 630 635 640
 Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly
 645 650 655
 Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly Leu
 660 665

<210> 409
 <211> 951
 <212> PRT
 <213> Homo sapiens

<400> 409
 Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
 1 5 10 15
 Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala Pro Pro Arg Leu
 20 25 30
 Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu
 35 40 45
 Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu
 50 55 60
 Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg

| 65 | | | | | 70 | | | | | | 75 | | | | 80 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Glu | Val | Gly | Gln | Gln | Ala | Val | Glu | Val | Trp | Gln | Gly | Leu | Ala | Leu |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Leu | Ser | Glu | Ala | Val | Leu | Arg | Gly | Gln | Ala | Leu | Leu | Val | Asn | Ser | Ser |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Gln | Pro | Trp | Glu | Pro | Leu | Gln | Leu | His | Val | Asp | Lys | Ala | Val | Ser | Gly |
| | | | 115 | | | | | 120 | | | | | 125 | | |
| Leu | Arg | Ser | Leu | Thr | Thr | Leu | Leu | Arg | Ala | Leu | Gly | Ala | Gln | Lys | Glu |
| | | | 130 | | | | | 135 | | | | 140 | | | |
| Ala | Ile | Ser | Pro | Pro | Asp | Ala | Ala | Ser | Ala | Ala | Pro | Leu | Arg | Thr | Ile |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Thr | Ala | Asp | Thr | Phe | Arg | Lys | Leu | Phe | Arg | Val | Tyr | Ser | Asn | Phe | Leu |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Arg | Gly | Lys | Leu | Lys | Leu | Tyr | Thr | Gly | Glu | Ala | Cys | Arg | Thr | Gly | Asp |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Asp | Ala | His | Lys | Ser | Glu | Val | Ala | His | Arg | Phe | Lys | Asp | Leu | Gly | Glu |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Glu | Asn | Phe | Lys | Ala | Leu | Val | Leu | Ile | Ala | Phe | Ala | Gln | Tyr | Leu | Gln |
| | 210 | | | | | | 215 | | | | 220 | | | | |
| Gln | Cys | Pro | Phe | Glu | Asp | His | Val | Lys | Leu | Val | Asn | Glu | Val | Thr | Glu |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Phe | Ala | Lys | Thr | Cys | Val | Ala | Asp | Glu | Ser | Ala | Glu | Asn | Cys | Asp | Lys |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Ser | Leu | His | Thr | Leu | Phe | Gly | Asp | Lys | Leu | Cys | Thr | Val | Ala | Thr | Leu |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Arg | Glu | Thr | Tyr | Gly | Glu | Met | Ala | Asp | Cys | Cys | Ala | Lys | Gln | Glu | Pro |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Glu | Arg | Asn | Glu | Cys | Phe | Leu | Gln | His | Lys | Asp | Asp | Asn | Pro | Asn | Leu |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Pro | Arg | Leu | Val | Arg | Pro | Glu | Val | Asp | Val | Met | Cys | Thr | Ala | Phe | His |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Asp | Asn | Glu | Glu | Thr | Phe | Leu | Lys | Lys | Tyr | Leu | Tyr | Glu | Ile | Ala | Arg |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Arg | His | Pro | Tyr | Phe | Tyr | Ala | Pro | Glu | Leu | Leu | Phe | Phe | Ala | Lys | Arg |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Tyr | Lys | Ala | Ala | Phe | Thr | Glu | Cys | Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala |
| | | 355 | | | | | 360 | | | | | 365 | | | |
| Cys | Leu | Leu | Pro | Lys | Leu | Asp | Glu | Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser |
| | 370 | | | | | 375 | | | | | 380 | | | | |
| Ser | Ala | Lys | Gln | Arg | Leu | Lys | Cys | Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 |
| Arg | Ala | Phe | Lys | Ala | Trp | Ala | Val | Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro |

| 405 | | | | | | | | | | 410 | | | | | 415 | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| Lys | Ala | Glu | Phe | Ala | Glu | Val | Ser | Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | | | | |
| | | | 420 | | | | | 425 | | | | | 430 | | | | | | |
| Val | His | Thr | Glu | Cys | Cys | His | Gly | Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | | | | |
| | | 435 | | | | | 440 | | | | | 445 | | | | | | | |
| Arg | Ala | Asp | Leu | Ala | Lys | Tyr | Ile | Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | | | | |
| | 450 | | | | | 455 | | | | | 460 | | | | | | | | |
| Ser | Lys | Leu | Lys | Glu | Cys | Cys | Glu | Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | | | | |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 | | | | |
| Cys | Ile | Ala | Glu | Val | Glu | Asn | Asp | Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | | | | |
| | | | | 485 | | | | | 490 | | | | | 495 | | | | | |
| Leu | Ala | Ala | Asp | Phe | Val | Glu | Ser | Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | | | | |
| | | | 500 | | | | | 505 | | | | | 510 | | | | | | |
| Glu | Ala | Lys | Asp | Val | Phe | Leu | Gly | Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | | | | |
| | 515 | | | | | | 520 | | | | | 525 | | | | | | | |
| Arg | His | Pro | Asp | Tyr | Ser | Val | Val | Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | | | | |
| | 530 | | | | | 535 | | | | | 540 | | | | | | | | |
| Tyr | Glu | Thr | Thr | Leu | Glu | Lys | Cys | Cys | Ala | Ala | Ala | Asp | Pro | His | Glu | | | | |
| 545 | | | | | 550 | | | | | 555 | | | | | 560 | | | | |
| Cys | Tyr | Ala | Lys | Val | Phe | Asp | Glu | Phe | Lys | Pro | Leu | Val | Glu | Glu | Pro | | | | |
| | | | | 565 | | | | | 570 | | | | | 575 | | | | | |
| Gln | Asn | Leu | Ile | Lys | Gln | Asn | Cys | Glu | Leu | Phe | Glu | Gln | Leu | Gly | Glu | | | | |
| | | | 580 | | | | | 585 | | | | | 590 | | | | | | |
| Tyr | Lys | Phe | Gln | Asn | Ala | Leu | Leu | Val | Arg | Tyr | Thr | Lys | Lys | Val | Pro | | | | |
| | 595 | | | | | | 600 | | | | | 605 | | | | | | | |
| Gln | Val | Ser | Thr | Pro | Thr | Leu | Val | Glu | Val | Ser | Arg | Asn | Leu | Gly | Lys | | | | |
| | 610 | | | | | 615 | | | | | 620 | | | | | | | | |
| Val | Gly | Ser | Lys | Cys | Cys | Lys | His | Pro | Glu | Ala | Lys | Arg | Met | Pro | Cys | | | | |
| 625 | | | | 630 | | | | | | 635 | | | | | 640 | | | | |
| Ala | Glu | Asp | Tyr | Leu | Ser | Val | Val | Leu | Asn | Gln | Leu | Cys | Val | Leu | His | | | | |
| | | | | 645 | | | | | 650 | | | | | 655 | | | | | |
| Glu | Lys | Thr | Pro | Val | Ser | Asp | Arg | Val | Thr | Lys | Cys | Cys | Thr | Glu | Ser | | | | |
| | | | 660 | | | | | 665 | | | | | 670 | | | | | | |
| Leu | Val | Asn | Arg | Arg | Pro | Cys | Phe | Ser | Ala | Leu | Glu | Val | Asp | Glu | Thr | | | | |
| | | 675 | | | | | 680 | | | | | 685 | | | | | | | |
| Tyr | Val | Pro | Lys | Glu | Phe | Asn | Ala | Glu | Thr | Phe | Thr | Phe | His | Ala | Asp | | | | |
| | 690 | | | | | 695 | | | | | 700 | | | | | | | | |
| Ile | Cys | Thr | Leu | Ser | Glu | Lys | Glu | Arg | Gln | Ile | Lys | Lys | Gln | Thr | Ala | | | | |
| 705 | | | | | 710 | | | | | 715 | | | | | 720 | | | | |
| Leu | Val | Glu | Leu | Val | Lys | His | Lys | Pro | Lys | Ala | Thr | Lys | Glu | Gln | Leu | | | | |
| | | | | 725 | | | | | 730 | | | | | 735 | | | | | |
| Lys | Ala | Val | Met | Asp | Asp | Phe | Ala | Ala | Phe | Val | Glu | Lys | Cys | Cys | Lys | | | | |

| 740 | | | | | 745 | | | | | 750 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Asp | Asp | Lys | Glu | Thr | Cys | Phe | Ala | Glu | Glu | Gly | Lys | Lys | Leu | Val |
| | 755 | | | | | | 760 | | | | | 765 | | | |
| Ala | Ala | Ser | Gln | Ala | Ala | Leu | Gly | Leu | Thr | Pro | Leu | Gly | Pro | Ala | Ser |
| | 770 | | | | | 775 | | | | | 780 | | | | |
| Ser | Leu | Pro | Gln | Ser | Phe | Leu | Leu | Lys | Cys | Leu | Glu | Gln | Val | Arg | Lys |
| 785 | | | | | 790 | | | | | 795 | | | | | 800 |
| Ile | Gln | Gly | Asp | Gly | Ala | Ala | Leu | Gln | Glu | Lys | Leu | Cys | Ala | Thr | Tyr |
| | | | | 805 | | | | | 810 | | | | | 815 | |
| Lys | Leu | Cys | His | Pro | Glu | Glu | Leu | Val | Leu | Leu | Gly | His | Ser | Leu | Gly |
| | | | 820 | | | | | 825 | | | | | 830 | | |
| Ile | Pro | Trp | Ala | Pro | Leu | Ser | Ser | Cys | Pro | Ser | Gln | Ala | Leu | Gln | Leu |
| | 835 | | | | | 840 | | | | | 845 | | | | |
| Ala | Gly | Cys | Leu | Ser | Gln | Leu | His | Ser | Gly | Leu | Phe | Leu | Tyr | Gln | Gly |
| | 850 | | | | | 855 | | | | | 860 | | | | |
| Leu | Leu | Gln | Ala | Leu | Glu | Gly | Ile | Ser | Pro | Glu | Leu | Gly | Pro | Thr | Leu |
| 865 | | | | | 870 | | | | | 875 | | | | | 880 |
| Asp | Thr | Leu | Gln | Leu | Asp | Val | Ala | Asp | Phe | Ala | Thr | Thr | Ile | Trp | Gln |
| | | | | 885 | | | | | 890 | | | | | 895 | |
| Gln | Met | Glu | Glu | Leu | Gly | Met | Ala | Pro | Ala | Leu | Gln | Pro | Thr | Gln | Gly |
| | | | | 900 | | | | 905 | | | | | 910 | | |
| Ala | Met | Pro | Ala | Phe | Ala | Ser | Ala | Phe | Gln | Arg | Arg | Ala | Gly | Gly | Val |
| | | 915 | | | | | 920 | | | | | 925 | | | |
| Leu | Val | Ala | Ser | His | Leu | Gln | Ser | Phe | Leu | Glu | Val | Ser | Tyr | Arg | Val |
| | 930 | | | | | 935 | | | | | 940 | | | | |
| Leu | Arg | His | Leu | Ala | Gln | Pro | | | | | | | | | |
| 945 | | | | | 950 | | | | | | | | | | |

<210> 410
 <211> 693
 <212> PRT
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| | | | | | | | | | | | | | | | |
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| <400> 410 | | | | | | | | | | | | | | | |
| Met | Lys | Trp | Val | Thr | Phe | Ile | Ser | Leu | Leu | Phe | Leu | Phe | Ser | Ser | Ala |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Tyr | Ser | Arg | Gly | Val | Phe | Arg | Arg | Ser | Val | Ser | Glu | Ile | Gln | Leu | Met |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| His | Asn | Leu | Gly | Lys | His | Leu | Asn | Ser | Met | Glu | Arg | Val | Glu | Trp | Leu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Arg | Lys | Lys | Leu | Gln | Asp | Val | His | Asn | Phe | Val | Ala | Leu | Gly | Ala | Pro |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Leu | Ala | Pro | Arg | Asp | Ala | Gly | Ser | Gln | Arg | Pro | Arg | Lys | Lys | Glu | Asp |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |

Asn Val Leu Val Glu Ser His Glu Lys Ser Leu Gly Glu Ala Asp Lys
 85 90 95
 Ala Asp Val Asn Val Leu Thr Lys Ala Lys Ser Gln Asp Ala His Lys
 100 105 110
 Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys
 115 120 125
 Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe
 130 135 140
 Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr
 145 150 155 160
 Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr
 165 170 175
 Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr
 180 185 190
 Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu
 195 200 205
 Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val
 210 215 220
 Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu
 225 230 235 240
 Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr
 245 250 255
 Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala
 260 265 270
 Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro
 275 280 285
 Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln
 290 295 300
 Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys
 305 310 315 320
 Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe
 325 330 335
 Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu
 340 345 350
 Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu
 355 360 365
 Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys
 370 375 380
 Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu
 385 390 395 400
 Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp
 405 410 415

Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp
 420 425 430
 Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp
 435 440 445
 Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr
 450 455 460
 Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys
 465 470 475 480
 Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile
 485 490 495
 Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln
 500 505 510
 Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr
 515 520 525
 Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys
 530 535 540
 Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr
 545 550 555 560
 Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro
 565 570 575
 Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg
 580 585 590
 Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys
 595 600 605
 Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu
 610 615 620
 Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu
 625 630 635 640
 Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met
 645 650 655
 Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys
 660 665 670
 Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln
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 Ala Ala Leu Gly Leu
 690

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 <212> PRT
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<400> 413
Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
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Tyr Ser Arg Gly Val Phe Arg Arg Asp Ala His Lys Ser Glu Val Ala
20 25 30
His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
35 40 45
Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
50 55 60
Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
65 70 75 80
Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
85 90 95
Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
100 105 110
Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln
115 120 125
His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
130 135 140
Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys
145 150 155 160
Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro
165 170 175
Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys
180 185 190
Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu
195 200 205
Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys
210 215 220
Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val
225 230 235 240

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|
| Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu | Phe | Ala | Glu | Val | Ser | | |
| | | | | 245 | | | | | 250 | | | | | 255 | | | |
| Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | Val | His | Thr | Glu | Cys | Cys | His | Gly | | |
| | | | 260 | | | | | 265 | | | | | 270 | | | | |
| Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | Arg | Ala | Asp | Leu | Ala | Lys | Tyr | Ile | | |
| | | 275 | | | | | 280 | | | | | 285 | | | | | |
| Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu | Lys | Glu | Cys | Cys | Glu | | |
| | 290 | | | | | 295 | | | | | 300 | | | | | | |
| Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | Cys | Ile | Ala | Glu | Val | Glu | Asn | Asp | | |
| 305 | | | | | 310 | | | | | 315 | | | | 320 | | | |
| Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | Leu | Ala | Ala | Asp | Phe | Val | Glu | Ser | | |
| | | | | 325 | | | | | 330 | | | | | 335 | | | |
| Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys | Asp | Val | Phe | Leu | Gly | | |
| | | | 340 | | | | | 345 | | | | | 350 | | | | |
| Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | Arg | His | Pro | Asp | Tyr | Ser | Val | Val | | |
| | 355 | | | | | | 360 | | | | | 365 | | | | | |
| Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | Tyr | Glu | Thr | Thr | Leu | Glu | Lys | Cys | | |
| | 370 | | | | | 375 | | | | | 380 | | | | | | |
| Cys | Ala | Ala | Ala | Asp | Pro | His | Glu | Cys | Tyr | Ala | Lys | Val | Phe | Asp | Glu | | |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 | | |
| Phe | Lys | Pro | Leu | Val | Glu | Glu | Pro | Gln | Asn | Leu | Ile | Lys | Gln | Asn | Cys | | |
| | | | | 405 | | | | | 410 | | | | | 415 | | | |
| Glu | Leu | Phe | Glu | Gln | Leu | Gly | Glu | Tyr | Lys | Phe | Gln | Asn | Ala | Leu | Leu | | |
| | | | 420 | | | | 425 | | | | | | 430 | | | | |
| Val | Arg | Tyr | Thr | Lys | Lys | Val | Pro | Gln | Val | Ser | Thr | Pro | Thr | Leu | Val | | |
| | | 435 | | | | | 440 | | | | | 445 | | | | | |
| Glu | Val | Ser | Arg | Asn | Leu | Gly | Lys | Val | Gly | Ser | Lys | Cys | Cys | Lys | His | | |
| | 450 | | | | | 455 | | | | | 460 | | | | | | |
| Pro | Glu | Ala | Lys | Arg | Met | Pro | Cys | Ala | Glu | Asp | Tyr | Leu | Ser | Val | Val | | |
| 465 | | | | | 470 | | | | | 475 | | | | 480 | | | |
| Leu | Asn | Gln | Leu | Cys | Val | Leu | His | Glu | Lys | Thr | Pro | Val | Ser | Asp | Arg | | |
| | | | | 485 | | | | | 490 | | | | | 495 | | | |
| Val | Thr | Lys | Cys | Cys | Thr | Glu | Ser | Leu | Val | Asn | Arg | Arg | Pro | Cys | Phe | | |
| | | | 500 | | | | | 505 | | | | | 510 | | | | |
| Ser | Ala | Leu | Glu | Val | Asp | Glu | Thr | Tyr | Val | Pro | Lys | Glu | Phe | Asn | Ala | | |
| | | 515 | | | | | 520 | | | | | 525 | | | | | |
| Glu | Thr | Phe | Thr | Phe | His | Ala | Asp | Ile | Cys | Thr | Leu | Ser | Glu | Lys | Glu | | |
| | 530 | | | | | 535 | | | | | 540 | | | | | | |
| Arg | Gln | Ile | Lys | Lys | Gln | Thr | Ala | Leu | Val | Glu | Leu | Val | Lys | His | Lys | | |
| 545 | | | | | 550 | | | | | 555 | | | | 560 | | | |
| Pro | Lys | Ala | Thr | Lys | Glu | Gln | Leu | Lys | Ala | Val | Met | Asp | Asp | Phe | Ala | | |
| | | | | 565 | | | | | 570 | | | | | 575 | | | |

Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe
580 585 590

Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
595 600 605

Leu Cys Gly Asn Leu Ser Thr Cys Met Leu Gly Thr Tyr Thr Gln Asp
610 615 620

Phe Asn Lys Phe His Thr Phe Pro Gln Thr Ala Ile Gly Val Gly Ala
625 630 635 640

Pro Gly

<210> 414
<211> 639
<212> PRT
<213> Homo sapiens

<400> 414
Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
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Tyr Ser Arg Ser Leu Asp Lys Arg His Ala Glu Gly Thr Phe Thr Ser
20 25 30

Asp Val Ser Ser Tyr Leu Glu Gly Gln Ala Ala Lys Glu Phe Ile Ala
35 40 45

Trp Leu Val Lys Gly Arg Asp Ala His Lys Ser Glu Val Ala His Arg
50 55 60

Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala
65 70 75 80

Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu
85 90 95

Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser
100 105 110

Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu
115 120 125

Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys
130 135 140

Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys
145 150 155 160

Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val
165 170 175

Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr
180 185 190

Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu
195 200 205

Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln

| 210 | 215 | 220 |
|---------------------|---------------------|-----------------------------|
| Ala Ala Asp Lys Ala | Ala Cys Leu Leu Pro | Lys Leu Asp Glu Leu Arg |
| 225 | 230 | 235 240 |
| Asp Glu Gly Lys Ala | Ser Ser Ala Lys | Gln Arg Leu Lys Cys Ala Ser |
| | 245 | 250 255 |
| Leu Gln Lys Phe Gly | Glu Arg Ala Phe | Lys Ala Trp Ala Val Ala Arg |
| | 260 | 265 270 |
| Leu Ser Gln Arg Phe | Pro Lys Ala Glu | Phe Ala Glu Val Ser Lys Leu |
| | 275 | 280 285 |
| Val Thr Asp Leu Thr | Lys Val His Thr | Glu Cys Cys His Gly Asp Leu |
| | 290 | 295 300 |
| Leu Glu Cys Ala Asp | Asp Arg Ala Asp | Leu Ala Lys Tyr Ile Cys Glu |
| 305 | 310 | 315 320 |
| Asn Gln Asp Ser Ile | Ser Ser Lys Leu | Lys Glu Cys Cys Glu Lys Pro |
| | 325 | 330 335 |
| Leu Leu Glu Lys Ser | His Cys Ile Ala | Glu Val Glu Asn Asp Glu Met |
| | 340 | 345 350 |
| Pro Ala Asp Leu Pro | Ser Leu Ala Ala | Asp Phe Val Glu Ser Lys Asp |
| | 355 | 360 365 |
| Val Cys Lys Asn Tyr | Ala Glu Ala Lys | Asp Val Phe Leu Gly Met Phe |
| | 370 | 375 380 |
| Leu Tyr Glu Tyr Ala | Arg Arg His Pro | Asp Tyr Ser Val Val Leu Leu |
| 385 | 390 | 395 400 |
| Leu Arg Leu Ala Lys | Thr Tyr Glu Thr | Thr Leu Glu Lys Cys Cys Ala |
| | 405 | 410 415 |
| Ala Ala Asp Pro His | Glu Cys Tyr Ala | Lys Val Phe Asp Glu Phe Lys |
| | 420 | 425 430 |
| Pro Leu Val Glu Glu | Pro Gln Asn Leu | Ile Lys Gln Asn Cys Glu Leu |
| | 435 | 440 445 |
| Phe Glu Gln Leu Gly | Glu Tyr Lys Phe | Gln Asn Ala Leu Leu Val Arg |
| | 450 | 455 460 |
| Tyr Thr Lys Lys Val | Pro Gln Val Ser | Thr Pro Thr Leu Val Glu Val |
| 465 | 470 | 475 480 |
| Ser Arg Asn Leu Gly | Lys Val Gly Ser | Lys Cys Cys Lys His Pro Glu |
| | 485 | 490 495 |
| Ala Lys Arg Met Pro | Cys Ala Glu Asp | Tyr Leu Ser Val Val Leu Asn |
| | 500 | 505 510 |
| Gln Leu Cys Val Leu | His Glu Lys Thr | Pro Val Ser Asp Arg Val Thr |
| | 515 | 520 525 |
| Lys Cys Cys Thr Glu | Ser Leu Val Asn | Arg Arg Pro Cys Phe Ser Ala |
| | 530 | 535 540 |
| Leu Glu Val Asp Glu | Thr Tyr Val Pro | Lys Glu Phe Asn Ala Glu Thr |

545 550 555 560
 Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln
 565 570 575
 Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys Pro Lys
 580 585 590
 Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe
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 Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu
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 Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly Leu
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 <211> 670
 <212> PRT
 <213> Homo sapiens

<400> 415
 Met Leu Leu Gln Ala Phe Leu Phe Leu Leu Ala Gly Phe Ala Ala Lys
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 20 25 30
 Thr Tyr Lys Ile Pro Arg Gln Arg Ile Met Asp Tyr Tyr Glu Thr Asn
 35 40 45
 Ser Gln Cys Ser Lys Pro Gly Ile Val Phe Ile Thr Lys Arg Gly His
 50 55 60
 Ser Val Cys Thr Asn Pro Ser Asp Lys Trp Val Gln Asp Tyr Ile Lys
 65 70 75 80
 Asp Met Lys Glu Asn Asp Ala His Lys Ser Glu Val Ala His Arg Phe
 85 90 95
 Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe
 100 105 110
 Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val
 115 120 125
 Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala
 130 135 140
 Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys
 145 150 155 160
 Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys
 165 170 175
 Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp
 180 185 190
 Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met
 195 200 205

Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu
 210 215 220
 Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu
 225 230 235 240
 Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala
 245 250 255
 Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp
 260 265 270
 Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu
 275 280 285
 Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu
 290 295 300
 Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val
 305 310 315 320
 Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu
 325 330 335
 Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn
 340 345 350
 Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu
 355 360 365
 Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro
 370 375 380
 Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val
 385 390 395 400
 Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu
 405 410 415
 Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu
 420 425 430
 Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala
 435 440 445
 Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro
 450 455 460
 Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe
 465 470 475 480
 Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr
 485 490 495
 Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser
 500 505 510
 Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala
 515 520 525
 Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln
 530 535 540

Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys
 545 550 555 560
 Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu
 565 570 575
 Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe
 580 585 590
 Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile
 595 600 605
 Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys Pro Lys Ala
 610 615 620
 Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val
 625 630 635 640
 Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu
 645 650 655
 Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly Leu
 660 665 670

<210> 416
 <211> 639
 <212> PRT
 <213> Homo sapiens

<400> 416
 Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1 5 10 15
 Tyr Ser Arg Ser Leu Asp Lys Arg Asp Ala His Lys Ser Glu Val Ala
 20 25 30
 His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
 35 40 45
 Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
 50 55 60
 Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
 65 70 75 80
 Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
 85 90 95
 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
 100 105 110
 Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln
 115 120 125
 His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
 130 135 140
 Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys
 145 150 155 160

Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro
 165 170 175
 Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys
 180 185 190
 Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu
 195 200 205
 Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys
 210 215 220
 Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val
 225 230 235 240
 Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser
 245 250 255
 Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly
 260 265 270
 Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile
 275 280 285
 Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu
 290 295 300
 Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp
 305 310 315 320
 Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser
 325 330 335
 Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly
 340 345 350
 Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val
 355 360 365
 Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys
 370 375 380
 Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu
 385 390 395 400
 Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys
 405 410 415
 Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu
 420 425 430
 Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val
 435 440 445
 Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His
 450 455 460
 Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val
 465 470 475 480
 Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg
 485 490 495

Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe
 500 505 510
 Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala
 515 520 525
 Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu
 530 535 540
 Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys
 545 550 555 560
 Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala
 565 570 575
 Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe
 580 585 590
 Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
 595 600 605
 Leu His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu
 610 615 620
 Gly Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg
 625 630 635

<210> 417
 <211> 639
 <212> PRT
 <213> Homo sapiens

<400> 417
 Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1 5 10 15
 Tyr Ser Arg Ser Leu Asp Lys Arg His Gly Glu Gly Thr Phe Thr Ser
 20 25 30
 Asp Val Ser Ser Tyr Leu Glu Gly Gln Ala Ala Lys Glu Phe Ile Ala
 35 40 45
 Trp Leu Val Lys Gly Arg Asp Ala His Lys Ser Glu Val Ala His Arg
 50 55 60
 Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala
 65 70 75 80
 Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu
 85 90 95
 Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser
 100 105 110
 Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu
 115 120 125
 Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys
 130 135 140
 Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys

| | | | | | | |
|---|--|-----|--|-----|--|-----|
| 145 | | 150 | | 155 | | 160 |
| Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val | | | | | | |
| | | 165 | | 170 | | 175 |
| Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr | | | | | | |
| | | 180 | | 185 | | 190 |
| Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu | | | | | | |
| | | 195 | | 200 | | 205 |
| Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln | | | | | | |
| | | 210 | | 215 | | 220 |
| Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg | | | | | | |
| | | 225 | | 230 | | 235 |
| Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser | | | | | | |
| | | 245 | | 250 | | 255 |
| Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg | | | | | | |
| | | 260 | | 265 | | 270 |
| Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu | | | | | | |
| | | 275 | | 280 | | 285 |
| Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly Asp Leu | | | | | | |
| | | 290 | | 295 | | 300 |
| Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu | | | | | | |
| | | 305 | | 310 | | 315 |
| Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro | | | | | | |
| | | 325 | | 330 | | 335 |
| Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu Met | | | | | | |
| | | 340 | | 345 | | 350 |
| Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser Lys Asp | | | | | | |
| | | 355 | | 360 | | 365 |
| Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly Met Phe | | | | | | |
| | | 370 | | 375 | | 380 |
| Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu | | | | | | |
| | | 385 | | 390 | | 395 |
| Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala | | | | | | |
| | | 405 | | 410 | | 415 |
| Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys | | | | | | |
| | | 420 | | 425 | | 430 |
| Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu | | | | | | |
| | | 435 | | 440 | | 445 |
| Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg | | | | | | |
| | | 450 | | 455 | | 460 |
| Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val | | | | | | |
| | | 465 | | 470 | | 475 |
| Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu | | | | | | |

| 485 | | | | | 490 | | | | | 495 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Lys | Arg | Met | Pro | Cys | Ala | Glu | Asp | Tyr | Leu | Ser | Val | Val | Leu | Asn |
| | | | 500 | | | | | 505 | | | | | 510 | | |
| Gln | Leu | Cys | Val | Leu | His | Glu | Lys | Thr | Pro | Val | Ser | Asp | Arg | Val | Thr |
| | | 515 | | | | | 520 | | | | | 525 | | | |
| Lys | Cys | Cys | Thr | Glu | Ser | Leu | Val | Asn | Arg | Arg | Pro | Cys | Phe | Ser | Ala |
| | | 530 | | | | 535 | | | | | 540 | | | | |
| Leu | Glu | Val | Asp | Glu | Thr | Tyr | Val | Pro | Lys | Glu | Phe | Asn | Ala | Glu | Thr |
| 545 | | | | | 550 | | | | | 555 | | | | | 560 |
| Phe | Thr | Phe | His | Ala | Asp | Ile | Cys | Thr | Leu | Ser | Glu | Lys | Glu | Arg | Gln |
| | | | | 565 | | | | | 570 | | | | | 575 | |
| Ile | Lys | Lys | Gln | Thr | Ala | Leu | Val | Glu | Leu | Val | Lys | His | Lys | Pro | Lys |
| | | | 580 | | | | | 585 | | | | | 590 | | |
| Ala | Thr | Lys | Glu | Gln | Leu | Lys | Ala | Val | Met | Asp | Asp | Phe | Ala | Ala | Phe |
| | | 595 | | | | | 600 | | | | | 605 | | | |
| Val | Glu | Lys | Cys | Cys | Lys | Ala | Asp | Asp | Lys | Glu | Thr | Cys | Phe | Ala | Glu |
| | 610 | | | | | 615 | | | | | 620 | | | | |
| Glu | Gly | Lys | Lys | Leu | Val | Ala | Ala | Ser | Gln | Ala | Ala | Leu | Gly | Leu | |
| 625 | | | | | 630 | | | | | 635 | | | | | |

<210> 418
 <211> 639
 <212> PRT
 <213> Homo sapiens

| <400> 418 | | | | | | | | | | | | | | | |
|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Lys | Trp | Val | Ser | Phe | Ile | Ser | Leu | Leu | Phe | Leu | Phe | Ser | Ser | Ala |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Tyr | Ser | Arg | Ser | Leu | Asp | Lys | Arg | Asp | Ala | His | Lys | Ser | Glu | Val | Ala |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| His | Arg | Phe | Lys | Asp | Leu | Gly | Glu | Glu | Asn | Phe | Lys | Ala | Leu | Val | Leu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Ile | Ala | Phe | Ala | Gln | Tyr | Leu | Gln | Gln | Cys | Pro | Phe | Glu | Asp | His | Val |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Lys | Leu | Val | Asn | Glu | Val | Thr | Glu | Phe | Ala | Lys | Thr | Cys | Val | Ala | Asp |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Glu | Ser | Ala | Glu | Asn | Cys | Asp | Lys | Ser | Leu | His | Thr | Leu | Phe | Gly | Asp |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Lys | Leu | Cys | Thr | Val | Ala | Thr | Leu | Arg | Glu | Thr | Tyr | Gly | Glu | Met | Ala |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Asp | Cys | Cys | Ala | Lys | Gln | Glu | Pro | Glu | Arg | Asn | Glu | Cys | Phe | Leu | Gln |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| His | Lys | Asp | Asp | Asn | Pro | Asn | Leu | Pro | Arg | Leu | Val | Arg | Pro | Glu | Val |
| | 130 | | | | | 135 | | | | | 140 | | | | |

Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys
 145 150 155 160
 Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro
 165 170 175
 Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys
 180 185 190
 Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu
 195 200 205
 Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys
 210 215 220
 Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val
 225 230 235 240
 Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser
 245 250 255
 Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly
 260 265 270
 Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile
 275 280 285
 Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu
 290 295 300
 Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp
 305 310 315 320
 Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser
 325 330 335
 Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly
 340 345 350
 Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val
 355 360 365
 Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys
 370 375 380
 Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu
 385 390 395 400
 Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys
 405 410 415
 Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu
 420 425 430
 Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val
 435 440 445
 Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His
 450 455 460
 Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val
 465 470 475 480

Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg
 485 490 495
 Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe
 500 505 510
 Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala
 515 520 525
 Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu
 530 535 540
 Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys
 545 550 555 560
 Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala
 565 570 575
 Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe
 580 585 590
 Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
 595 600 605
 Leu His Gly Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu
 610 615 620
 Gly Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg
 625 630 635

<210> 419
 <211> 648
 <212> PRT
 <213> Homo sapiens

<400> 419
 Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1 5 10 15
 Tyr Ser Arg Gly Val Phe Arg Arg Asp Ala His Lys Ser Glu Val Ala
 20 25 30
 His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
 35 40 45
 Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
 50 55 60
 Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
 65 70 75 80
 Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
 85 90 95
 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
 100 105 110
 Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln
 115 120 125

His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
 130 135 140
 Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys
 145 150 155 160
 Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro
 165 170 175
 Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys
 180 185 190
 Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu
 195 200 205
 Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys
 210 215 220
 Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val
 225 230 235 240
 Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser
 245 250 255
 Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly
 260 265 270
 Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile
 275 280 285
 Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu
 290 295 300
 Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp
 305 310 315 320
 Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser
 325 330 335
 Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly
 340 345 350
 Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val
 355 360 365
 Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys
 370 375 380
 Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu
 385 390 395 400
 Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys
 405 410 415
 Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu
 420 425 430
 Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val
 435 440 445
 Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His
 450 455 460

Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val
 465 470 475 480
 Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg
 485 490 495
 Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe
 500 505 510
 Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala
 515 520 525
 Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu
 530 535 540
 Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys
 545 550 555 560
 Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala
 565 570 575
 Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe
 580 585 590
 Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
 595 600 605
 Leu His Gly Glu Gly Thr Phe Thr Ser Asp Leu Ser Lys Gln Met Glu
 610 615 620
 Glu Glu Ala Val Arg Leu Phe Ile Glu Trp Leu Lys Asn Gly Gly Pro
 625 630 635 640
 Ser Ser Gly Ala Pro Pro Pro Ser
 645

<210> 420
 <211> 648
 <212> PRT
 <213> Homo sapiens

<400> 420
 Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1 5 10 15
 Tyr Ser Arg Ser Leu Asp Lys Arg His Gly Glu Gly Thr Phe Thr Ser
 20 25 30
 Asp Leu Ser Lys Gln Met Glu Glu Glu Ala Val Arg Leu Phe Ile Glu
 35 40 45
 Trp Leu Lys Asn Gly Gly Pro Ser Ser Gly Ala Pro Pro Pro Ser Asp
 50 55 60
 Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu
 65 70 75 80
 Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln
 85 90 95
 Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe

| 100 | | | | | 105 | | | | | 110 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Lys | Thr | Cys | Val | Ala | Asp | Glu | Ser | Ala | Glu | Asn | Cys | Asp | Lys | Ser |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Leu | His | Thr | Leu | Phe | Gly | Asp | Lys | Leu | Cys | Thr | Val | Ala | Thr | Leu | Arg |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Glu | Thr | Tyr | Gly | Glu | Met | Ala | Asp | Cys | Cys | Ala | Lys | Gln | Glu | Pro | Glu |
| 145 | | | | | | 150 | | | | | 155 | | | | 160 |
| Arg | Asn | Glu | Cys | Phe | Leu | Gln | His | Lys | Asp | Asp | Asn | Pro | Asn | Leu | Pro |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Arg | Leu | Val | Arg | Pro | Glu | Val | Asp | Val | Met | Cys | Thr | Ala | Phe | His | Asp |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Asn | Glu | Glu | Thr | Phe | Leu | Lys | Lys | Tyr | Leu | Tyr | Glu | Ile | Ala | Arg | Arg |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| His | Pro | Tyr | Phe | Tyr | Ala | Pro | Glu | Leu | Leu | Phe | Phe | Ala | Lys | Arg | Tyr |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Lys | Ala | Ala | Phe | Thr | Glu | Cys | Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala | Cys |
| 225 | | | | | | 230 | | | | | 235 | | | | 240 |
| Leu | Leu | Pro | Lys | Leu | Asp | Glu | Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser | Ser |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Ala | Lys | Gln | Arg | Leu | Lys | Cys | Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Ala | Phe | Lys | Ala | Trp | Ala | Val | Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Ala | Glu | Phe | Ala | Glu | Val | Ser | Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | Val |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| His | Thr | Glu | Cys | Cys | His | Gly | Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | Arg |
| 305 | | | | | | 310 | | | | | 315 | | | | 320 |
| Ala | Asp | Leu | Ala | Lys | Tyr | Ile | Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Lys | Leu | Lys | Glu | Cys | Cys | Glu | Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | Cys |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Ile | Ala | Glu | Val | Glu | Asn | Asp | Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | Leu |
| | | 355 | | | | | 360 | | | | | 365 | | | |
| Ala | Ala | Asp | Phe | Val | Glu | Ser | Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu |
| | 370 | | | | | 375 | | | | | 380 | | | | |
| Ala | Lys | Asp | Val | Phe | Leu | Gly | Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | Arg |
| 385 | | | | | | 390 | | | | | 395 | | | | 400 |
| His | Pro | Asp | Tyr | Ser | Val | Val | Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | Tyr |
| | | | | 405 | | | | | 410 | | | | | 415 | |
| Glu | Thr | Thr | Leu | Glu | Lys | Cys | Cys | Ala | Ala | Ala | Asp | Pro | His | Glu | Cys |
| | | | 420 | | | | | 425 | | | | | 430 | | |
| Tyr | Ala | Lys | Val | Phe | Asp | Glu | Phe | Lys | Pro | Leu | Val | Glu | Glu | Pro | Gln |

| | | | | |
|---|--|-----|--|-----|
| 435 | | 440 | | 445 |
| Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr | | | | |
| 450 | | 455 | | 460 |
| Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln | | | | |
| 465 | | 470 | | 475 |
| Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val | | | | |
| | | 485 | | 490 |
| Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala | | | | |
| | | 500 | | 505 |
| Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu | | | | |
| | | 515 | | 520 |
| Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu | | | | |
| | | 530 | | 535 |
| Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr | | | | |
| | | 545 | | 550 |
| Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile | | | | |
| | | 565 | | 570 |
| Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu | | | | |
| | | 580 | | 585 |
| Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys | | | | |
| | | 595 | | 600 |
| Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala | | | | |
| | | 610 | | 615 |
| Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala | | | | |
| | | 625 | | 630 |
| Ala Ser Gln Ala Ala Leu Gly Leu | | | | |
| | | 645 | | |

<210> 421
 <211> 1018
 <212> PRT
 <213> Homo sapiens

| |
|---|
| <400> 421 |
| Met Cys Pro Gly Ala Leu Trp Val Ala Leu Pro Leu Leu Ser Leu Leu |
| 1 5 10 15 |
| Ala Gly Ser Leu Gln Gly Lys Pro Leu Gln Ser Trp Gly Arg Gly Ser |
| 20 25 30 |
| Ala Gly Gly Asn Ala His Ser Pro Leu Gly Val Pro Gly Gly Gly Leu |
| 35 40 45 |
| Pro Glu His Thr Phe Asn Leu Lys Met Phe Leu Glu Asn Val Lys Val |
| 50 55 60 |
| Asp Phe Leu Arg Ser Leu Asn Leu Ser Gly Val Pro Ser Gln Asp Lys |
| 65 70 75 80 |

Thr Arg Val Glu Pro Pro Gln Tyr Met Ile Asp Leu Tyr Asn Arg Tyr
 85 90 95
 Thr Ser Asp Lys Ser Thr Thr Pro Ala Ser Asn Ile Val Arg Ser Phe
 100 105 110
 Ser Met Glu Asp Ala Ile Ser Ile Thr Ala Thr Glu Asp Phe Pro Phe
 115 120 125
 Gln Lys His Ile Leu Leu Phe Asn Ile Ser Ile Pro Arg His Glu Gln
 130 135 140
 Ile Thr Arg Ala Glu Leu Arg Leu Tyr Val Ser Cys Gln Asn His Val
 145 150 155 160
 Asp Pro Ser His Asp Leu Lys Gly Ser Val Val Ile Tyr Asp Val Leu
 165 170 175
 Asp Gly Thr Asp Ala Trp Asp Ser Ala Thr Glu Thr Lys Thr Phe Leu
 180 185 190
 Val Ser Gln Asp Ile Gln Asp Glu Gly Trp Glu Thr Leu Glu Val Ser
 195 200 205
 Ser Ala Val Lys Arg Trp Val Arg Ser Asp Ser Thr Lys Ser Lys Asn
 210 215 220
 Lys Leu Glu Val Thr Val Glu Ser His Arg Lys Gly Cys Asp Thr Leu
 225 230 235 240
 Asp Ile Ser Val Pro Pro Gly Ser Arg Asn Leu Pro Phe Phe Val Val
 245 250 255
 Phe Ser Asn Asp His Ser Ser Gly Thr Lys Glu Thr Arg Leu Glu Leu
 260 265 270
 Arg Glu Met Ile Ser His Glu Gln Glu Ser Val Leu Lys Lys Leu Ser
 275 280 285
 Lys Asp Gly Ser Thr Glu Ala Gly Glu Ser Ser His Glu Glu Asp Thr
 290 295 300
 Asp Gly His Val Ala Ala Gly Ser Thr Leu Ala Arg Arg Lys Arg Leu
 305 310 315 320
 Glu Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly
 325 330 335
 Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu
 340 345 350
 Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr
 355 360 365
 Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp
 370 375 380
 Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr
 385 390 395 400
 Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu
 405 410 415

Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn
 420 425 430
 Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe
 435 440 445
 His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala
 450 455 460
 Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys
 465 470 475 480
 Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala
 485 490 495
 Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala
 500 505 510
 Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly
 515 520 525
 Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe
 530 535 540
 Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr
 545 550 555 560
 Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp
 565 570 575
 Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile
 580 585 590
 Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser
 595 600 605
 His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro
 610 615 620
 Ser Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr
 625 630 635 640
 Ala Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala
 645 650 655
 Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys
 660 665 670
 Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His
 675 680 685
 Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu
 690 695 700
 Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly
 705 710 715 720
 Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val
 725 730 735
 Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly
 740 745 750

Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro
 755 760 765
 Cys Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu
 770 775 780
 His Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu
 785 790 795 800
 Ser Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu
 805 810 815
 Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala
 820 825 830
 Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr
 835 840 845
 Ala Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln
 850 855 860
 Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys
 865 870 875 880
 Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu
 885 890 895
 Val Ala Ala Ser Gln Ala Ala Leu Gly Leu Leu Glu Ser Ala Gly Ala
 900 905 910
 Gly Ser His Cys Gln Lys Thr Ser Leu Arg Val Asn Phe Glu Asp Ile
 915 920 925
 Gly Trp Asp Ser Trp Ile Ile Ala Pro Lys Glu Tyr Glu Ala Tyr Glu
 930 935 940
 Cys Lys Gly Gly Cys Phe Phe Pro Leu Ala Asp Asp Val Thr Pro Thr
 945 950 955 960
 Lys His Ala Ile Val Gln Thr Leu Val His Leu Lys Phe Pro Thr Lys
 965 970 975
 Val Gly Lys Ala Cys Cys Val Pro Thr Lys Leu Ser Pro Ile Ser Val
 980 985 990
 Leu Tyr Lys Asp Asp Met Gly Val Pro Thr Leu Lys Tyr His Tyr Glu
 995 1000 1005
 Gly Met Ser Val Ala Glu Cys Gly Cys Arg
 1010 1015

<210> 422
 <211> 677
 <212> PRT
 <213> Homo sapiens

<400> 422
 Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1 5 10 15

Tyr Ser Arg Ser Leu Asp Lys Arg Pro Tyr Gly Ala Asn Met Glu Asp
 20 25 30
 Ser Val Cys Cys Arg Asp Tyr Val Arg Tyr Arg Leu Pro Leu Arg Val
 35 40 45
 Val Lys His Phe Tyr Trp Thr Ser Asp Ser Cys Pro Arg Pro Gly Val
 50 55 60
 Val Leu Leu Thr Phe Arg Asp Lys Glu Ile Cys Ala Asp Pro Arg Val
 65 70 75 80
 Pro Trp Val Lys Met Ile Leu Asn Lys Leu Ser Gln Asp Ala His Lys
 85 90 95
 Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys
 100 105 110
 Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe
 115 120 125
 Glu Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr
 130 135 140
 Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr
 145 150 155 160
 Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr
 165 170 175
 Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu
 180 185 190
 Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val
 195 200 205
 Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu
 210 215 220
 Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr
 225 230 235 240
 Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala
 245 250 255
 Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro
 260 265 270
 Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln
 275 280 285
 Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys
 290 295 300
 Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe
 305 310 315 320
 Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu
 325 330 335
 Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu
 340 345 350

Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys
 355 360 365
 Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu
 370 375 380
 Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp
 385 390 395 400
 Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp
 405 410 415
 Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp
 420 425 430
 Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr
 435 440 445
 Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys
 450 455 460
 Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile
 465 470 475 480
 Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln
 485 490 495
 Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr
 500 505 510
 Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys
 515 520 525
 Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr
 530 535 540
 Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro
 545 550 555 560
 Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg
 565 570 575
 Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys
 580 585 590
 Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu
 595 600 605
 Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu
 610 615 620
 Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met
 625 630 635 640
 Asp Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys
 645 650 655
 Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln
 660 665 670
 Ala Ala Leu Gly Leu
 675

<210> 423
 <211> 677
 <212> PRT
 <213> Homo sapiens

<400> 423

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Lys | Trp | Val | Ser | Phe | Ile | Ser | Leu | Leu | Phe | Leu | Phe | Ser | Ser | Ala |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Tyr | Ser | Arg | Ser | Leu | Asp | Lys | Arg | Met | Tyr | Gly | Ala | Asn | Met | Glu | Asp |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Ser | Val | Cys | Cys | Arg | Asp | Tyr | Val | Arg | Tyr | Arg | Leu | Pro | Leu | Arg | Val |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Val | Lys | His | Phe | Tyr | Trp | Thr | Ser | Asp | Ser | Cys | Pro | Arg | Pro | Gly | Val |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Val | Leu | Leu | Thr | Phe | Arg | Asp | Lys | Glu | Ile | Cys | Ala | Asp | Pro | Arg | Val |
| | 65 | | | | 70 | | | | | 75 | | | | | 80 |
| Pro | Trp | Val | Lys | Met | Ile | Leu | Asn | Lys | Leu | Ser | Gln | Asp | Ala | His | Lys |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Ser | Glu | Val | Ala | His | Arg | Phe | Lys | Asp | Leu | Gly | Glu | Glu | Asn | Phe | Lys |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Ala | Leu | Val | Leu | Ile | Ala | Phe | Ala | Gln | Tyr | Leu | Gln | Gln | Cys | Pro | Phe |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Glu | Asp | His | Val | Lys | Leu | Val | Asn | Glu | Val | Thr | Glu | Phe | Ala | Lys | Thr |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Cys | Val | Ala | Asp | Glu | Ser | Ala | Glu | Asn | Cys | Asp | Lys | Ser | Leu | His | Thr |
| | 145 | | | | 150 | | | | | 155 | | | | | 160 |
| Leu | Phe | Gly | Asp | Lys | Leu | Cys | Thr | Val | Ala | Thr | Leu | Arg | Glu | Thr | Tyr |
| | | | 165 | | | | | | 170 | | | | | 175 | |
| Gly | Glu | Met | Ala | Asp | Cys | Cys | Ala | Lys | Gln | Glu | Pro | Glu | Arg | Asn | Glu |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Cys | Phe | Leu | Gln | His | Lys | Asp | Asp | Asn | Pro | Asn | Leu | Pro | Arg | Leu | Val |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Arg | Pro | Glu | Val | Asp | Val | Met | Cys | Thr | Ala | Phe | His | Asp | Asn | Glu | Glu |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Thr | Phe | Leu | Lys | Lys | Tyr | Leu | Tyr | Glu | Ile | Ala | Arg | Arg | His | Pro | Tyr |
| | 225 | | | | 230 | | | | | 235 | | | | | 240 |
| Phe | Tyr | Ala | Pro | Glu | Leu | Leu | Phe | Phe | Ala | Lys | Arg | Tyr | Lys | Ala | Ala |
| | | | 245 | | | | | | 250 | | | | | 255 | |
| Phe | Thr | Glu | Cys | Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala | Cys | Leu | Leu | Pro |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Lys | Leu | Asp | Glu | Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser | Ser | Ala | Lys | Gln |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Arg | Leu | Lys | Cys | Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe | Lys |

| 290 | 295 | 300 |
|--|-----|-----|
| Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe 305 310 315 320 | | |
| Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu 325 330 335 | | |
| Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu 340 345 350 | | |
| Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys 355 360 365 | | |
| Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu 370 375 380 | | |
| Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp 385 390 395 400 | | |
| Phe Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp 405 410 415 | | |
| Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp 420 425 430 | | |
| Tyr Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr 435 440 445 | | |
| Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys 450 455 460 | | |
| Val Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile 465 470 475 480 | | |
| Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln 485 490 495 | | |
| Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr 500 505 510 | | |
| Pro Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys 515 520 525 | | |
| Cys Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr 530 535 540 | | |
| Leu Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro 545 550 555 560 | | |
| Val Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg 565 570 575 | | |
| Arg Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys 580 585 590 | | |
| Glu Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu 595 600 605 | | |
| Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu 610 615 620 | | |
| Val Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met | | |

Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe
 245 250 255
 Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys
 260 265 270
 Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg
 275 280 285
 Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala
 290 295 300
 Trp Ala Val Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala
 305 310 315 320
 Glu Val Ser Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys
 325 330 335
 Cys His Gly Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala
 340 345 350
 Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu
 355 360 365
 Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val
 370 375 380
 Glu Asn Asp Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe
 385 390 395 400
 Val Glu Ser Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val
 405 410 415
 Phe Leu Gly Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr
 420 425 430
 Ser Val Val Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu
 435 440 445
 Glu Lys Cys Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val
 450 455 460
 Phe Asp Glu Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys
 465 470 475 480
 Gln Asn Cys Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn
 485 490 495
 Ala Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro
 500 505 510
 Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys
 515 520 525
 Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu
 530 535 540
 Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val
 545 550 555 560
 Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg
 565 570 575

Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu
 580 585 590
 Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser
 595 600 605
 Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val
 610 615 620
 Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp
 625 630 635 640
 Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu
 645 650 655
 Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala
 660 665 670
 Ala Leu Gly Leu
 675

<210> 425
 <211> 676
 <212> PRT
 <213> Homo sapiens

<400> 425
 Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1 5 10 15
 Tyr Ser Arg Ser Leu Asp Lys Arg Met Gly Ala Asn Met Glu Asp Ser
 20 25 30
 Val Cys Cys Arg Asp Tyr Val Arg Tyr Arg Leu Pro Leu Arg Val Val
 35 40 45
 Lys His Phe Tyr Trp Thr Ser Asp Ser Cys Pro Arg Pro Gly Val Val
 50 55 60
 Leu Leu Thr Phe Arg Asp Lys Glu Ile Cys Ala Asp Pro Arg Val Pro
 65 70 75 80
 Trp Val Lys Met Ile Leu Asn Lys Leu Ser Gln Asp Ala His Lys Ser
 85 90 95
 Glu Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala
 100 105 110
 Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu
 115 120 125
 Asp His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys
 130 135 140
 Val Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu
 145 150 155 160
 Phe Gly Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly
 165 170 175

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Glu | Met | Ala | Asp | Cys | Cys | Ala | Lys | Gln | Glu | Pro | Glu | Arg | Asn | Glu | Cys | |
| | | | 180 | | | | | 185 | | | | | 190 | | | |
| Phe | Leu | Gln | His | Lys | Asp | Asp | Asn | Pro | Asn | Leu | Pro | Arg | Leu | Val | Arg | |
| | | 195 | | | | | 200 | | | | | 205 | | | | |
| Pro | Glu | Val | Asp | Val | Met | Cys | Thr | Ala | Phe | His | Asp | Asn | Glu | Glu | Thr | |
| | 210 | | | | | 215 | | | | | 220 | | | | | |
| Phe | Leu | Lys | Lys | Tyr | Leu | Tyr | Glu | Ile | Ala | Arg | Arg | His | Pro | Tyr | Phe | |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 | |
| Tyr | Ala | Pro | Glu | Leu | Leu | Phe | Phe | Ala | Lys | Arg | Tyr | Lys | Ala | Ala | Phe | |
| | | | | 245 | | | | | 250 | | | | | 255 | | |
| Thr | Glu | Cys | Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala | Cys | Leu | Leu | Pro | Lys | |
| | | | 260 | | | | | 265 | | | | | | 270 | | |
| Leu | Asp | Glu | Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser | Ser | Ala | Lys | Gln | Arg | |
| | | 275 | | | | | 280 | | | | | 285 | | | | |
| Leu | Lys | Cys | Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe | Lys | Ala | |
| | 290 | | | | | 295 | | | | | 300 | | | | | |
| Trp | Ala | Val | Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu | Phe | Ala | |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 | |
| Glu | Val | Ser | Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | Val | His | Thr | Glu | Cys | |
| | | | | 325 | | | | | 330 | | | | | 335 | | |
| Cys | His | Gly | Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | Arg | Ala | Asp | Leu | Ala | |
| | | | 340 | | | | | 345 | | | | | 350 | | | |
| Lys | Tyr | Ile | Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu | Lys | Glu | |
| | | 355 | | | | | 360 | | | | | 365 | | | | |
| Cys | Cys | Glu | Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | Cys | Ile | Ala | Glu | Val | |
| | 370 | | | | | 375 | | | | | 380 | | | | | |
| Glu | Asn | Asp | Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | Leu | Ala | Ala | Asp | Phe | |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 | |
| Val | Glu | Ser | Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys | Asp | Val | |
| | | | | 405 | | | | | 410 | | | | | 415 | | |
| Phe | Leu | Gly | Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | Arg | His | Pro | Asp | Tyr | |
| | | | 420 | | | | | 425 | | | | | 430 | | | |
| Ser | Val | Val | Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | Tyr | Glu | Thr | Thr | Leu | |
| | | 435 | | | | | 440 | | | | | 445 | | | | |
| Glu | Lys | Cys | Cys | Ala | Ala | Ala | Asp | Pro | His | Glu | Cys | Tyr | Ala | Lys | Val | |
| | 450 | | | | | 455 | | | | | 460 | | | | | |
| Phe | Asp | Glu | Phe | Lys | Pro | Leu | Val | Glu | Glu | Pro | Gln | Asn | Leu | Ile | Lys | |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 | |
| Gln | Asn | Cys | Glu | Leu | Phe | Glu | Gln | Leu | Gly | Glu | Tyr | Lys | Phe | Gln | Asn | |
| | | | | 485 | | | | | 490 | | | | | 495 | | |
| Ala | Leu | Leu | Val | Arg | Tyr | Thr | Lys | Lys | Val | Pro | Gln | Val | Ser | Thr | Pro | |
| | | | 500 | | | | | 505 | | | | | 510 | | | |

Thr Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys
 515 520 525
 Cys Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu
 530 535 540
 Ser Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val
 545 550 555 560
 Ser Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg
 565 570 575
 Pro Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu
 580 585 590
 Phe Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser
 595 600 605
 Glu Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val
 610 615 620
 Lys His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp
 625 630 635 640
 Asp Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu
 645 650 655
 Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala
 660 665 670
 Ala Leu Gly Leu
 675

<210> 426
 <211> 726
 <212> PRT
 <213> Homo sapiens

<400> 426
 Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1 5 10 15
 Tyr Ser Arg Ser Leu Asp Lys Arg Asp Ala His Lys Ser Glu Val Ala
 20 25 30
 His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
 35 40 45
 Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
 50 55 60
 Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
 65 70 75 80
 Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
 85 90 95
 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
 100 105 110
 Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln
 115 120 125

His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
 130 135 140
 Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys
 145 150 155 160
 Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro
 165 170 175
 Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys
 180 185 190
 Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu
 195 200 205
 Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys
 210 215 220
 Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val
 225 230 235 240
 Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser
 245 250 255
 Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly
 260 265 270
 Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile
 275 280 285
 Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu
 290 295 300
 Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp
 305 310 315 320
 Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser
 325 330 335
 Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly
 340 345 350
 Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val
 355 360 365
 Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys
 370 375 380
 Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu
 385 390 395 400
 Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys
 405 410 415
 Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu
 420 425 430
 Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val
 435 440 445
 Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His
 450 455 460

Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val
 465 470 475 480
 Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg
 485 490 495
 Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe
 500 505 510
 Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala
 515 520 525
 Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu
 530 535 540
 Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys
 545 550 555 560
 Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala
 565 570 575
 Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe
 580 585 590
 Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
 595 600 605
 Leu Ala Arg Pro Thr Pro Pro Thr Cys Tyr Ser Arg Met Arg Ala Leu
 610 615 620
 Ser Gln Glu Ile Thr Arg Asp Phe Asn Leu Leu Gln Val Ser Glu Pro
 625 630 635 640
 Ser Glu Pro Cys Val Arg Tyr Leu Pro Arg Leu Tyr Leu Asp Ile His
 645 650 655
 Asn Tyr Cys Val Leu Asp Lys Leu Arg Asp Phe Val Ala Ser Pro Pro
 660 665 670
 Cys Trp Lys Val Ala Gln Val Asp Ser Leu Lys Asp Lys Ala Arg Lys
 675 680 685
 Leu Tyr Thr Ile Met Asn Ser Phe Cys Arg Arg Asp Leu Val Phe Leu
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 Leu Pro Asp Arg Gln Arg
 725

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 <212> PRT
 <213> Homo sapiens

<400> 427
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Tyr Ser Arg Ser Leu Asp Lys Arg Ala Arg Pro Thr Pro Pro Thr Cys

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Ser | Arg | Met | Arg | Ala | Leu | Ser | Gln | Glu | Ile | Thr | Arg | Asp | Phe | Asn |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Leu | Leu | Gln | Val | Ser | Glu | Pro | Ser | Glu | Pro | Cys | Val | Arg | Tyr | Leu | Pro |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Arg | Leu | Tyr | Leu | Asp | Ile | His | Asn | Tyr | Cys | Val | Leu | Asp | Lys | Leu | Arg |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Asp | Phe | Val | Ala | Ser | Pro | Pro | Cys | Trp | Lys | Val | Ala | Gln | Val | Asp | Ser |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Leu | Lys | Asp | Lys | Ala | Arg | Lys | Leu | Tyr | Thr | Ile | Met | Asn | Ser | Phe | Cys |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Arg | Arg | Asp | Leu | Val | Phe | Leu | Leu | Asp | Asp | Cys | Asn | Ala | Leu | Glu | Tyr |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Pro | Ile | Pro | Val | Thr | Thr | Val | Leu | Pro | Asp | Arg | Gln | Arg | Asp | Ala | His |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Lys | Ser | Glu | Val | Ala | His | Arg | Phe | Lys | Asp | Leu | Gly | Glu | Glu | Asn | Phe |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| Lys | Ala | Leu | Val | Leu | Ile | Ala | Phe | Ala | Gln | Tyr | Leu | Gln | Gln | Cys | Pro |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Phe | Glu | Asp | His | Val | Lys | Leu | Val | Asn | Glu | Val | Thr | Glu | Phe | Ala | Lys |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Thr | Cys | Val | Ala | Asp | Glu | Ser | Ala | Glu | Asn | Cys | Asp | Lys | Ser | Leu | His |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Thr | Leu | Phe | Gly | Asp | Lys | Leu | Cys | Thr | Val | Ala | Thr | Leu | Arg | Glu | Thr |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Tyr | Gly | Glu | Met | Ala | Asp | Cys | Cys | Ala | Lys | Gln | Glu | Pro | Glu | Arg | Asn |
| 225 | | | | | 230 | | | | | 235 | | | | | 240 |
| Glu | Cys | Phe | Leu | Gln | His | Lys | Asp | Asp | Asn | Pro | Asn | Leu | Pro | Arg | Leu |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Val | Arg | Pro | Glu | Val | Asp | Val | Met | Cys | Thr | Ala | Phe | His | Asp | Asn | Glu |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Glu | Thr | Phe | Leu | Lys | Lys | Tyr | Leu | Tyr | Glu | Ile | Ala | Arg | Arg | His | Pro |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Tyr | Phe | Tyr | Ala | Pro | Glu | Leu | Leu | Phe | Phe | Ala | Lys | Arg | Tyr | Lys | Ala |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Ala | Phe | Thr | Glu | Cys | Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala | Cys | Leu | Leu |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| Pro | Lys | Leu | Asp | Glu | Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser | Ser | Ala | Lys |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Gln | Arg | Leu | Lys | Cys | Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Lys | Ala | Trp | Ala | Val | Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu |

| | | | | |
|-------------------------|---|-----|--|-----|
| 355 | | 360 | | 365 |
| Phe Ala Glu Val Ser Lys | Leu Val Thr Asp Leu Thr Lys Val His Thr | | | |
| 370 | 375 | 380 | | |
| Glu Cys Cys His Gly Asp | Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp | | | |
| 385 | 390 | 395 | | 400 |
| Leu Ala Lys Tyr Ile Cys | Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu | | | |
| | 405 | 410 | | 415 |
| Lys Glu Cys Cys Glu Lys | Pro Leu Leu Glu Lys Ser His Cys Ile Ala | | | |
| | 420 | 425 | | 430 |
| Glu Val Glu Asn Asp Glu | Met Pro Ala Asp Leu Pro Ser Leu Ala Ala | | | |
| | 435 | 440 | | 445 |
| Asp Phe Val Glu Ser Lys | Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys | | | |
| | 450 | 455 | | 460 |
| Asp Val Phe Leu Gly Met | Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro | | | |
| | 465 | 470 | | 475 |
| Asp Tyr Ser Val Val Leu | Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr | | | |
| | 485 | 490 | | 495 |
| Thr Leu Glu Lys Cys Cys | Ala Ala Ala Asp Pro His Glu Cys Tyr Ala | | | |
| | 500 | 505 | | 510 |
| Lys Val Phe Asp Glu Phe | Lys Pro Leu Val Glu Glu Pro Gln Asn Leu | | | |
| | 515 | 520 | | 525 |
| Ile Lys Gln Asn Cys Glu | Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe | | | |
| | 530 | 535 | | 540 |
| Gln Asn Ala Leu Leu Val | Arg Tyr Thr Lys Lys Val Pro Gln Val Ser | | | |
| | 545 | 550 | | 555 |
| Thr Pro Thr Leu Val Glu | Val Ser Arg Asn Leu Gly Lys Val Gly Ser | | | |
| | 565 | 570 | | 575 |
| Lys Cys Cys Lys His Pro | Glu Ala Lys Arg Met Pro Cys Ala Glu Asp | | | |
| | 580 | 585 | | 590 |
| Tyr Leu Ser Val Val Leu | Asn Gln Leu Cys Val Leu His Glu Lys Thr | | | |
| | 595 | 600 | | 605 |
| Pro Val Ser Asp Arg Val | Thr Lys Cys Cys Thr Glu Ser Leu Val Asn | | | |
| | 610 | 615 | | 620 |
| Arg Arg Pro Cys Phe Ser | Ala Leu Glu Val Asp Glu Thr Tyr Val Pro | | | |
| | 625 | 630 | | 635 |
| Lys Glu Phe Asn Ala Glu | Thr Phe Thr Phe His Ala Asp Ile Cys Thr | | | |
| | 645 | 650 | | 655 |
| Leu Ser Glu Lys Glu Arg | Gln Ile Lys Lys Gln Thr Ala Leu Val Glu | | | |
| | 660 | 665 | | 670 |
| Leu Val Lys His Lys Pro | Lys Ala Thr Lys Glu Gln Leu Lys Ala Val | | | |
| | 675 | 680 | | 685 |
| Met Asp Asp Phe Ala Ala | Phe Val Glu Lys Cys Cys Lys Ala Asp Asp | | | |

| | | | | |
|---|-----|-----|-----|---------|
| 690 | | 695 | | 700 |
| Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser | | | | |
| 705 | | 710 | | 715 720 |
| Gln Ala Ala Leu Gly Leu | | | | |
| | | 725 | | |
| | | | | |
| <210> 428 | | | | |
| <211> 771 | | | | |
| <212> PRT | | | | |
| <213> Homo sapiens | | | | |
| | | | | |
| <400> 428 | | | | |
| Met Thr Asn Lys Cys Leu Leu Gln Ile Ala Leu Leu Leu Cys Phe Ser | | | | |
| 1 | | 5 | | 10 15 |
| Thr Thr Ala Leu Ser Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg Ser | | | | |
| | 20 | | 25 | 30 |
| Ser Asn Phe Gln Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu | | | | |
| | 35 | | 40 | 45 |
| Glu Tyr Cys Leu Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile | | | | |
| | 50 | | 55 | 60 |
| Lys Gln Leu Gln Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr | | | | |
| | 65 | | 70 | 75 80 |
| Glu Met Leu Gln Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser | | | | |
| | | 85 | 90 | 95 |
| Thr Gly Trp Asn Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr | | | | |
| | 100 | | 105 | 110 |
| His Gln Ile Asn His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys | | | | |
| | 115 | | 120 | 125 |
| Glu Asp Phe Thr Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg | | | | |
| | 130 | | 135 | 140 |
| Tyr Tyr Gly Arg Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His | | | | |
| | 145 | | 150 | 155 160 |
| Cys Ala Trp Thr Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe | | | | |
| | | 165 | 170 | 175 |
| Ile Asn Arg Leu Thr Gly Tyr Leu Arg Asn Asp Ala His Lys Ser Glu | | | | |
| | 180 | | 185 | 190 |
| Val Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu | | | | |
| | 195 | | 200 | 205 |
| Val Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp | | | | |
| | 210 | | 215 | 220 |
| His Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val | | | | |
| | 225 | | 230 | 235 240 |
| Ala Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe | | | | |
| | | 245 | 250 | 255 |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Gly | Asp | Lys | Leu | Cys | Thr | Val | Ala | Thr | Leu | Arg | Glu | Thr | Tyr | Gly | Glu | |
| | | | 260 | | | | | 265 | | | | | 270 | | | |
| Met | Ala | Asp | Cys | Cys | Ala | Lys | Gln | Glu | Pro | Glu | Arg | Asn | Glu | Cys | Phe | |
| | | 275 | | | | | 280 | | | | | 285 | | | | |
| Leu | Gln | His | Lys | Asp | Asp | Asn | Pro | Asn | Leu | Pro | Arg | Leu | Val | Arg | Pro | |
| | 290 | | | | | 295 | | | | | 300 | | | | | |
| Glu | Val | Asp | Val | Met | Cys | Thr | Ala | Phe | His | Asp | Asn | Glu | Glu | Thr | Phe | |
| 305 | | | | | 310 | | | | | 315 | | | | | 320 | |
| Leu | Lys | Lys | Tyr | Leu | Tyr | Glu | Ile | Ala | Arg | Arg | His | Pro | Tyr | Phe | Tyr | |
| | | | 325 | | | | | | 330 | | | | | 335 | | |
| Ala | Pro | Glu | Leu | Leu | Phe | Phe | Ala | Lys | Arg | Tyr | Lys | Ala | Ala | Phe | Thr | |
| | | | 340 | | | | | 345 | | | | | 350 | | | |
| Glu | Cys | Cys | Gln | Ala | Ala | Asp | Lys | Ala | Ala | Cys | Leu | Leu | Pro | Lys | Leu | |
| | | 355 | | | | | 360 | | | | | 365 | | | | |
| Asp | Glu | Leu | Arg | Asp | Glu | Gly | Lys | Ala | Ser | Ser | Ala | Lys | Gln | Arg | Leu | |
| | 370 | | | | | 375 | | | | | 380 | | | | | |
| Lys | Cys | Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe | Lys | Ala | Trp | |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 | |
| Ala | Val | Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu | Phe | Ala | Glu | |
| | | | | 405 | | | | | 410 | | | | | 415 | | |
| Val | Ser | Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | Val | His | Thr | Glu | Cys | Cys | |
| | | | 420 | | | | | 425 | | | | | | | | |
| His | Gly | Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | Arg | Ala | Asp | Leu | Ala | Lys | |
| | | 435 | | | | | 440 | | | | | 445 | | | | |
| Tyr | Ile | Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu | Lys | Glu | Cys | |
| | 450 | | | | | 455 | | | | | 460 | | | | | |
| Cys | Glu | Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | Cys | Ile | Ala | Glu | Val | Glu | |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 | |
| Asn | Asp | Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | Leu | Ala | Ala | Asp | Phe | Val | |
| | | | | 485 | | | | | 490 | | | | | 495 | | |
| Glu | Ser | Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys | Asp | Val | Phe | |
| | | | 500 | | | | | 505 | | | | | 510 | | | |
| Leu | Gly | Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | Arg | His | Pro | Asp | Tyr | Ser | |
| | | 515 | | | | | 520 | | | | | 525 | | | | |
| Val | Val | Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | Tyr | Glu | Thr | Thr | Leu | Glu | |
| | 530 | | | | | 535 | | | | | 540 | | | | | |
| Lys | Cys | Cys | Ala | Ala | Ala | Asp | Pro | His | Glu | Cys | Tyr | Ala | Lys | Val | Phe | |
| 545 | | | | | 550 | | | | | 555 | | | | | 560 | |
| Asp | Glu | Phe | Lys | Pro | Leu | Val | Glu | Glu | Pro | Gln | Asn | Leu | Ile | Lys | Gln | |
| | | | | 565 | | | | | 570 | | | | | 575 | | |
| Asn | Cys | Glu | Leu | Phe | Glu | Gln | Leu | Gly | Glu | Tyr | Lys | Phe | Gln | Asn | Ala | |
| | | | 580 | | | | | 585 | | | | | 590 | | | |

Leu Leu Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr
 595 600 605
 Leu Val Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys
 610 615 620
 Lys His Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser
 625 630 635 640
 Val Val Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser
 645 650 655
 Asp Arg Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro
 660 665 670
 Cys Phe Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe
 675 680 685
 Asn Ala Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu
 690 695 700
 Lys Glu Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys
 705 710 715 720
 His Lys Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp
 725 730 735
 Phe Ala Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr
 740 745 750
 Cys Phe Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala
 755 760 765
 Leu Gly Leu
 770

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 <212> PRT
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<400> 429
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 His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
 35 40 45
 Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
 50 55 60
 Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
 65 70 75 80
 Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
 85 90 95

Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
 100 105 110
 Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln
 115 120 125
 His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
 130 135 140
 Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys
 145 150 155 160
 Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro
 165 170 175
 Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys
 180 185 190
 Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu
 195 200 205
 Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys
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 Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val
 225 230 235 240
 Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser
 245 250 255
 Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly
 260 265 270
 Asp Leu Leu Glu Cys Ala Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile
 275 280 285
 Cys Glu Asn Gln Asp Ser Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu
 290 295 300
 Lys Pro Leu Leu Glu Lys Ser His Cys Ile Ala Glu Val Glu Asn Asp
 305 310 315 320
 Glu Met Pro Ala Asp Leu Pro Ser Leu Ala Ala Asp Phe Val Glu Ser
 325 330 335
 Lys Asp Val Cys Lys Asn Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly
 340 345 350
 Met Phe Leu Tyr Glu Tyr Ala Arg Arg His Pro Asp Tyr Ser Val Val
 355 360 365
 Leu Leu Leu Arg Leu Ala Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys
 370 375 380
 Cys Ala Ala Ala Asp Pro His Glu Cys Tyr Ala Lys Val Phe Asp Glu
 385 390 395 400
 Phe Lys Pro Leu Val Glu Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys
 405 410 415
 Glu Leu Phe Glu Gln Leu Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu
 420 425 430

Val Arg Tyr Thr Lys Lys Val Pro Gln Val Ser Thr Pro Thr Leu Val
435 440 445
Glu Val Ser Arg Asn Leu Gly Lys Val Gly Ser Lys Cys Cys Lys His
450 455 460
Pro Glu Ala Lys Arg Met Pro Cys Ala Glu Asp Tyr Leu Ser Val Val
465 470 475 480
Leu Asn Gln Leu Cys Val Leu His Glu Lys Thr Pro Val Ser Asp Arg
485 490 495
Val Thr Lys Cys Cys Thr Glu Ser Leu Val Asn Arg Arg Pro Cys Phe
500 505 510
Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala
515 520 525
Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu
530 535 540
Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys
545 550 555 560
Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala
565 570 575
Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe
580 585 590
Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
595 600 605
Leu Gly Lys Val Ser Gly Thr Lys Lys Glu Asn Cys Pro Tyr Ser Ile
610 615 620
Leu Glu Ile Thr Ser Val Glu Ile Gly Val Val Ala Val Lys Ala Ile
625 630 635 640
Asn Ser Asn Tyr Tyr Leu Ala Met Asn Lys Lys Gly Lys Leu Tyr Gly
645 650 655
Ser Lys Glu Phe Asn Asn Asp Cys Lys Leu Lys Glu Arg Ile Glu Glu
660 665 670
Asn Gly Tyr Asn Thr Tyr Ala Ser Phe Asn Trp Gln His Asn Gly Arg
675 680 685
Gln Met Tyr Val Ala Leu Asn Gly Lys Gly Ala Pro Arg Arg Gly Gln
690 695 700
Lys Thr Arg Arg Lys Asn Thr Ser Ala His Phe Leu Pro Met Val Val
705 710 715 720
His Ser

<210> 430
<211> 722
<212> PRT
<213> Homo sapiens

<400> 430

Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
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Tyr Ser Arg Gly Val Phe Arg Arg Gly Lys Val Ser Gly Thr Lys Lys
20 25 30
Glu Asn Cys Pro Tyr Ser Ile Leu Glu Ile Thr Ser Val Glu Ile Gly
35 40 45
Val Val Ala Val Lys Ala Ile Asn Ser Asn Tyr Tyr Leu Ala Met Asn
50 55 60
Lys Lys Gly Lys Leu Tyr Gly Ser Lys Glu Phe Asn Asn Asp Cys Lys
65 70 75 80
Leu Lys Glu Arg Ile Glu Glu Asn Gly Tyr Asn Thr Tyr Ala Ser Phe
85 90 95
Asn Trp Gln His Asn Gly Arg Gln Met Tyr Val Ala Leu Asn Gly Lys
100 105 110
Gly Ala Pro Arg Arg Gly Gln Lys Thr Arg Arg Lys Asn Thr Ser Ala
115 120 125
His Phe Leu Pro Met Val Val His Ser Asp Ala His Lys Ser Glu Val
130 135 140
Ala His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val
145 150 155 160
Leu Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His
165 170 175
Val Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala
180 185 190
Asp Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly
195 200 205
Asp Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met
210 215 220
Ala Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu
225 230 235 240
Gln His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu
245 250 255
Val Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu
260 265 270
Lys Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala
275 280 285
Pro Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu
290 295 300
Cys Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp
305 310 315 320
Glu Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys

| 325 | | | | | | | | | | 330 | | | | | 335 | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| Cys | Ala | Ser | Leu | Gln | Lys | Phe | Gly | Glu | Arg | Ala | Phe | Lys | Ala | Trp | Ala | | | | |
| | | | 340 | | | | | 345 | | | | | 350 | | | | | | |
| Val | Ala | Arg | Leu | Ser | Gln | Arg | Phe | Pro | Lys | Ala | Glu | Phe | Ala | Glu | Val | | | | |
| | | 355 | | | | | 360 | | | | | 365 | | | | | | | |
| Ser | Lys | Leu | Val | Thr | Asp | Leu | Thr | Lys | Val | His | Thr | Glu | Cys | Cys | His | | | | |
| | | 370 | | | | 375 | | | | | 380 | | | | | | | | |
| Gly | Asp | Leu | Leu | Glu | Cys | Ala | Asp | Asp | Arg | Ala | Asp | Leu | Ala | Lys | Tyr | | | | |
| 385 | | | | | 390 | | | | | 395 | | | | | 400 | | | | |
| Ile | Cys | Glu | Asn | Gln | Asp | Ser | Ile | Ser | Ser | Lys | Leu | Lys | Glu | Cys | Cys | | | | |
| | | | | 405 | | | | | 410 | | | | | 415 | | | | | |
| Glu | Lys | Pro | Leu | Leu | Glu | Lys | Ser | His | Cys | Ile | Ala | Glu | Val | Glu | Asn | | | | |
| | | | 420 | | | | | 425 | | | | | 430 | | | | | | |
| Asp | Glu | Met | Pro | Ala | Asp | Leu | Pro | Ser | Leu | Ala | Ala | Asp | Phe | Val | Glu | | | | |
| | | 435 | | | | | 440 | | | | | 445 | | | | | | | |
| Ser | Lys | Asp | Val | Cys | Lys | Asn | Tyr | Ala | Glu | Ala | Lys | Asp | Val | Phe | Leu | | | | |
| | | 450 | | | | 455 | | | | | 460 | | | | | | | | |
| Gly | Met | Phe | Leu | Tyr | Glu | Tyr | Ala | Arg | Arg | His | Pro | Asp | Tyr | Ser | Val | | | | |
| 465 | | | | | 470 | | | | | 475 | | | | | 480 | | | | |
| Val | Leu | Leu | Leu | Arg | Leu | Ala | Lys | Thr | Tyr | Glu | Thr | Thr | Leu | Glu | Lys | | | | |
| | | | | 485 | | | | | 490 | | | | | 495 | | | | | |
| Cys | Cys | Ala | Ala | Ala | Asp | Pro | His | Glu | Cys | Tyr | Ala | Lys | Val | Phe | Asp | | | | |
| | | | 500 | | | | | 505 | | | | | 510 | | | | | | |
| Glu | Phe | Lys | Pro | Leu | Val | Glu | Glu | Pro | Gln | Asn | Leu | Ile | Lys | Gln | Asn | | | | |
| | | 515 | | | | | 520 | | | | | 525 | | | | | | | |
| Cys | Glu | Leu | Phe | Glu | Gln | Leu | Gly | Glu | Tyr | Lys | Phe | Gln | Asn | Ala | Leu | | | | |
| | | 530 | | | | 535 | | | | | 540 | | | | | | | | |
| Leu | Val | Arg | Tyr | Thr | Lys | Lys | Val | Pro | Gln | Val | Ser | Thr | Pro | Thr | Leu | | | | |
| 545 | | | | | 550 | | | | | 555 | | | | | 560 | | | | |
| Val | Glu | Val | Ser | Arg | Asn | Leu | Gly | Lys | Val | Gly | Ser | Lys | Cys | Cys | Lys | | | | |
| | | | 565 | | | | | | 570 | | | | | 575 | | | | | |
| His | Pro | Glu | Ala | Lys | Arg | Met | Pro | Cys | Ala | Glu | Asp | Tyr | Leu | Ser | Val | | | | |
| | | | 580 | | | | | 585 | | | | | 590 | | | | | | |
| Val | Leu | Asn | Gln | Leu | Cys | Val | Leu | His | Glu | Lys | Thr | Pro | Val | Ser | Asp | | | | |
| | | 595 | | | | | 600 | | | | | 605 | | | | | | | |
| Arg | Val | Thr | Lys | Cys | Cys | Thr | Glu | Ser | Leu | Val | Asn | Arg | Arg | Pro | Cys | | | | |
| | | 610 | | | | 615 | | | | | 620 | | | | | | | | |
| Phe | Ser | Ala | Leu | Glu | Val | Asp | Glu | Thr | Tyr | Val | Pro | Lys | Glu | Phe | Asn | | | | |
| 625 | | | | | 630 | | | | | 635 | | | | | 640 | | | | |
| Ala | Glu | Thr | Phe | Thr | Phe | His | Ala | Asp | Ile | Cys | Thr | Leu | Ser | Glu | Lys | | | | |
| | | | | 645 | | | | | 650 | | | | | 655 | | | | | |
| Glu | Arg | Gln | Ile | Lys | Lys | Gln | Thr | Ala | Leu | Val | Glu | Leu | Val | Lys | His | | | | |

| | | | | | | |
|---|---|-----|-----|-----|-----|-----|
| 225 | | 230 | | 235 | | 240 |
| Ala Gln Ala Glu Asp | Glu Ala Asp Tyr Tyr Cys Asn Ser Arg Asp Ser | | | | | |
| | 245 | | | 250 | | 255 |
| Ser Gly Asn His Trp Val Phe Gly Gly Gly Thr Glu Leu Thr Val Leu | | | | | | |
| | 260 | | 265 | | | 270 |
| Gly Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu Gly | | | | | | |
| | 275 | | 280 | | 285 | |
| Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr Leu | | | | | | |
| | 290 | | 295 | | 300 | |
| Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val Thr | | | | | | |
| 305 | | 310 | | 315 | | 320 |
| Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys Asp | | | | | | |
| | 325 | | 330 | | | 335 |
| Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala Thr | | | | | | |
| | 340 | | 345 | | | 350 |
| Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln Glu | | | | | | |
| | 355 | | 360 | | | 365 |
| Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro Asn | | | | | | |
| | 370 | | 375 | | 380 | |
| Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala Phe | | | | | | |
| 385 | | 390 | | 395 | | 400 |
| His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile Ala | | | | | | |
| | 405 | | 410 | | | 415 |
| Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala Lys | | | | | | |
| | 420 | | 425 | | | 430 |
| Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys Ala | | | | | | |
| | 435 | | 440 | | | 445 |
| Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys Ala | | | | | | |
| | 450 | | 455 | | | 460 |
| Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe Gly | | | | | | |
| 465 | | 470 | | 475 | | 480 |
| Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg Phe | | | | | | |
| | 485 | | 490 | | | 495 |
| Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu Thr | | | | | | |
| | 500 | | 505 | | | 510 |
| Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala Asp | | | | | | |
| | 515 | | 520 | | | 525 |
| Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser Ile | | | | | | |
| | 530 | | 535 | | | 540 |
| Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys Ser | | | | | | |
| 545 | | 550 | | 555 | | 560 |
| His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu Pro | | | | | | |

| 565 | | | | | | | | | | 570 | | | | | 575 | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|--|--|
| Ser | Leu | Ala | Ala | Asp | Phe | Val | Glu | Ser | Lys | Asp | Val | Cys | Lys | Asn | Tyr | | | | | | |
| | | | 580 | | | | | 585 | | | | | 590 | | | | | | | | |
| Ala | Glu | Ala | Lys | Asp | Val | Phe | Leu | Gly | Met | Phe | Leu | Tyr | Glu | Tyr | Ala | | | | | | |
| | | 595 | | | | | 600 | | | | | 605 | | | | | | | | | |
| Arg | Arg | His | Pro | Asp | Tyr | Ser | Val | Val | Leu | Leu | Leu | Arg | Leu | Ala | Lys | | | | | | |
| | 610 | | | | | 615 | | | | | | 620 | | | | | | | | | |
| Thr | Tyr | Glu | Thr | Thr | Leu | Glu | Lys | Cys | Cys | Ala | Ala | Ala | Asp | Pro | His | | | | | | |
| 625 | | | | | 630 | | | | | 635 | | | | | 640 | | | | | | |
| Glu | Cys | Tyr | Ala | Lys | Val | Phe | Asp | Glu | Phe | Lys | Pro | Leu | Val | Glu | Glu | | | | | | |
| | | | | 645 | | | | | 650 | | | | | 655 | | | | | | | |
| Pro | Gln | Asn | Leu | Ile | Lys | Gln | Asn | Cys | Glu | Leu | Phe | Glu | Gln | Leu | Gly | | | | | | |
| | | | 660 | | | | | 665 | | | | | 670 | | | | | | | | |
| Glu | Tyr | Lys | Phe | Gln | Asn | Ala | Leu | Leu | Val | Arg | Tyr | Thr | Lys | Lys | Val | | | | | | |
| | | 675 | | | | | 680 | | | | | 685 | | | | | | | | | |
| Pro | Gln | Val | Ser | Thr | Pro | Thr | Leu | Val | Glu | Val | Ser | Arg | Asn | Leu | Gly | | | | | | |
| | | 690 | | | | 695 | | | | | | 700 | | | | | | | | | |
| Lys | Val | Gly | Ser | Lys | Cys | Cys | Lys | His | Pro | Glu | Ala | Lys | Arg | Met | Pro | | | | | | |
| 705 | | | | | 710 | | | | | 715 | | | | | 720 | | | | | | |
| Cys | Ala | Glu | Asp | Tyr | Leu | Ser | Val | Val | Leu | Asn | Gln | Leu | Cys | Val | Leu | | | | | | |
| | | | | 725 | | | | | 730 | | | | | 735 | | | | | | | |
| His | Glu | Lys | Thr | Pro | Val | Ser | Asp | Arg | Val | Thr | Lys | Cys | Cys | Thr | Glu | | | | | | |
| | | | 740 | | | | | 745 | | | | | 750 | | | | | | | | |
| Ser | Leu | Val | Asn | Arg | Arg | Pro | Cys | Phe | Ser | Ala | Leu | Glu | Val | Asp | Glu | | | | | | |
| | | 755 | | | | | 760 | | | | | 765 | | | | | | | | | |
| Thr | Tyr | Val | Pro | Lys | Glu | Phe | Asn | Ala | Glu | Thr | Phe | Thr | Phe | His | Ala | | | | | | |
| | 770 | | | | | 775 | | | | | 780 | | | | | | | | | | |
| Asp | Ile | Cys | Thr | Leu | Ser | Glu | Lys | Glu | Arg | Gln | Ile | Lys | Lys | Gln | Thr | | | | | | |
| 785 | | | | | 790 | | | | | 795 | | | | | 800 | | | | | | |
| Ala | Leu | Val | Glu | Leu | Val | Lys | His | Lys | Pro | Lys | Ala | Thr | Lys | Glu | Gln | | | | | | |
| | | | | 805 | | | | | 810 | | | | | 815 | | | | | | | |
| Leu | Lys | Ala | Val | Met | Asp | Asp | Phe | Ala | Ala | Phe | Val | Glu | Lys | Cys | Cys | | | | | | |
| | | | 820 | | | | 825 | | | | | | 830 | | | | | | | | |
| Lys | Ala | Asp | Asp | Lys | Glu | Thr | Cys | Phe | Ala | Glu | Glu | Gly | Lys | Lys | Leu | | | | | | |
| | | 835 | | | | | 840 | | | | | 845 | | | | | | | | | |
| Val | Ala | Ala | Ser | Gln | Ala | Ala | Leu | Gly | Leu | | | | | | | | | | | | |
| | | 850 | | | | | 855 | | | | | | | | | | | | | | |

<210> 432
 <211> 859
 <212> PRT
 <213> Homo sapiens

<400> 432

Met Lys Trp Val Ser Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
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20 25 30
Val Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala
35 40 45
Ser Gly Tyr Thr Phe Ser Asn His Gly Ile Ser Trp Val Arg Gln Ala
50 55 60
Pro Gly Gln Gly Leu Glu Trp Val Gly Trp Ile Ser Gly His Asp Asp
65 70 75 80
Ser Thr Lys Tyr Ala Gln Lys Phe Gln Gly Arg Val Thr Met Thr Ala
85 90 95
Asp Thr Ser Thr Ser Thr Ala Tyr Ile Glu Leu Arg Ser Leu Lys Ser
100 105 110
Asp Asp Thr Ala Val Tyr Tyr Cys Ala Arg Pro Phe Tyr Asp Thr Leu
115 120 125
Thr Ser Tyr Val Phe Gln Tyr Phe Asp His Trp Gly Gln Gly Thr Met
130 135 140
Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
145 150 155 160
Gly Gly Gly Ser Ala Leu Glu Thr Thr Leu Thr Gln Ser Pro Asp Thr
165 170 175
Leu Ser Leu Ser Pro Gly Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser
180 185 190
Gln Ser Val Thr Arg Gly Trp Val Ala Trp Tyr Gln Gln Lys Pro Gly
195 200 205
Gln Ala Pro Arg Leu Leu Met Tyr Gly Thr Ser Arg Arg Ala Thr Gly
210 215 220
Val Pro Asp Arg Phe Ser Gly Ser Glu Ser Gly Thr Asp Phe Thr Leu
225 230 235 240
Thr Ile Ser Arg Leu Glu Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln
245 250 255
Gln Tyr Ala Thr Ser Pro Arg Thr Phe Gly Gln Gly Thr Arg Leu Glu
260 265 270
Ile Lys Asp Ala His Lys Ser Glu Val Ala His Arg Phe Lys Asp Leu
275 280 285
Gly Glu Glu Asn Phe Lys Ala Leu Val Leu Ile Ala Phe Ala Gln Tyr
290 295 300
Leu Gln Gln Cys Pro Phe Glu Asp His Val Lys Leu Val Asn Glu Val
305 310 315 320
Thr Glu Phe Ala Lys Thr Cys Val Ala Asp Glu Ser Ala Glu Asn Cys
325 330 335

Asp Lys Ser Leu His Thr Leu Phe Gly Asp Lys Leu Cys Thr Val Ala
 340 345 350
 Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala Asp Cys Cys Ala Lys Gln
 355 360 365
 Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln His Lys Asp Asp Asn Pro
 370 375 380
 Asn Leu Pro Arg Leu Val Arg Pro Glu Val Asp Val Met Cys Thr Ala
 385 390 395 400
 Phe His Asp Asn Glu Glu Thr Phe Leu Lys Lys Tyr Leu Tyr Glu Ile
 405 410 415
 Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro Glu Leu Leu Phe Phe Ala
 420 425 430
 Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys Cys Gln Ala Ala Asp Lys
 435 440 445
 Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu Leu Arg Asp Glu Gly Lys
 450 455 460
 Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys Ala Ser Leu Gln Lys Phe
 465 470 475 480
 Gly Glu Arg Ala Phe Lys Ala Trp Ala Val Ala Arg Leu Ser Gln Arg
 485 490 495
 Phe Pro Lys Ala Glu Phe Ala Glu Val Ser Lys Leu Val Thr Asp Leu
 500 505 510
 Thr Lys Val His Thr Glu Cys Cys His Gly Asp Leu Leu Glu Cys Ala
 515 520 525
 Asp Asp Arg Ala Asp Leu Ala Lys Tyr Ile Cys Glu Asn Gln Asp Ser
 530 535 540
 Ile Ser Ser Lys Leu Lys Glu Cys Cys Glu Lys Pro Leu Leu Glu Lys
 545 550 555 560
 Ser His Cys Ile Ala Glu Val Glu Asn Asp Glu Met Pro Ala Asp Leu
 565 570 575
 Pro Ser Leu Ala Ala Asp Phe Val Glu Ser Lys Asp Val Cys Lys Asn
 580 585 590
 Tyr Ala Glu Ala Lys Asp Val Phe Leu Gly Met Phe Leu Tyr Glu Tyr
 595 600 605
 Ala Arg Arg His Pro Asp Tyr Ser Val Val Leu Leu Leu Arg Leu Ala
 610 615 620
 Lys Thr Tyr Glu Thr Thr Leu Glu Lys Cys Cys Ala Ala Ala Asp Pro
 625 630 635 640
 His Glu Cys Tyr Ala Lys Val Phe Asp Glu Phe Lys Pro Leu Val Glu
 645 650 655
 Glu Pro Gln Asn Leu Ile Lys Gln Asn Cys Glu Leu Phe Glu Gln Leu
 660 665 670

Gly Glu Tyr Lys Phe Gln Asn Ala Leu Leu Val Arg Tyr Thr Lys Lys
 675 680 685
 Val Pro Gln Val Ser Thr Pro Thr Leu Val Glu Val Ser Arg Asn Leu
 690 695 700
 Gly Lys Val Gly Ser Lys Cys Cys Lys His Pro Glu Ala Lys Arg Met
 705 710 715 720
 Pro Cys Ala Glu Asp Tyr Leu Ser Val Val Leu Asn Gln Leu Cys Val
 725 730 735
 Leu His Glu Lys Thr Pro Val Ser Asp Arg Val Thr Lys Cys Cys Thr
 740 745 750
 Glu Ser Leu Val Asn Arg Arg Pro Cys Phe Ser Ala Leu Glu Val Asp
 755 760 765
 Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala Glu Thr Phe Thr Phe His
 770 775 780
 Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu Arg Gln Ile Lys Lys Gln
 785 790 795 800
 Thr Ala Leu Val Glu Leu Val Lys His Lys Pro Lys Ala Thr Lys Glu
 805 810 815
 Gln Leu Lys Ala Val Met Asp Asp Phe Ala Ala Phe Val Glu Lys Cys
 820 825 830
 Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe Ala Glu Glu Gly Lys Lys
 835 840 845
 Leu Val Ala Ala Ser Gln Ala Ala Leu Gly Leu
 850 855

<210> 433
 <211> 271
 <212> PRT
 <213> Homo sapiens

<400> 433
 Val Ala Glu Thr Pro Thr Tyr Pro Trp Arg Asp Ala Glu Thr Gly Glu
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 Arg Leu Val Cys Ala Gln Cys Pro Pro Gly Thr Phe Val Gln Arg Pro
 20 25 30
 Cys Arg Arg Asp Ser Pro Thr Thr Cys Gly Pro Cys Pro Pro Arg His
 35 40 45
 Tyr Thr Gln Phe Trp Asn Tyr Leu Glu Arg Cys Arg Tyr Cys Asn Val
 50 55 60
 Leu Cys Gly Glu Arg Glu Glu Glu Ala Arg Ala Cys His Ala Thr His
 65 70 75 80
 Asn Arg Ala Cys Arg Cys Arg Thr Gly Phe Phe Ala His Ala Gly Phe
 85 90 95
 Cys Leu Glu His Ala Ser Cys Pro Pro Gly Ala Gly Val Ile Ala Pro

| 100 | | | | | 105 | | | | | 110 | | | | | |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Thr | Pro | Ser | Gln | Asn | Thr | Gln | Cys | Gln | Pro | Cys | Pro | Pro | Gly | Thr |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Phe | Ser | Ala | Ser | Ser | Ser | Ser | Ser | Glu | Gln | Cys | Gln | Pro | His | Arg | Asn |
| | | 130 | | | | | 135 | | | | | 140 | | | |
| Cys | Thr | Ala | Leu | Gly | Leu | Ala | Leu | Asn | Val | Pro | Gly | Ser | Ser | Ser | His |
| | | | | | | | 150 | | | | | 155 | | | 160 |
| Asp | Thr | Leu | Cys | Thr | Ser | Cys | Thr | Gly | Phe | Pro | Leu | Ser | Thr | Arg | Val |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Pro | Gly | Ala | Glu | Glu | Cys | Glu | Arg | Ala | Val | Ile | Asp | Phe | Val | Ala | Phe |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Gln | Asp | Ile | Ser | Ile | Lys | Arg | Leu | Gln | Arg | Leu | Leu | Gln | Ala | Leu | Glu |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Ala | Pro | Glu | Gly | Trp | Gly | Pro | Thr | Pro | Arg | Ala | Gly | Arg | Ala | Ala | Leu |
| | | 210 | | | | | 215 | | | | | 220 | | | |
| Gln | Leu | Lys | Leu | Arg | Arg | Arg | Leu | Thr | Glu | Leu | Leu | Gly | Ala | Gln | Asp |
| | | | | | | | 230 | | | | | 235 | | | 240 |
| Gly | Ala | Leu | Leu | Val | Arg | Leu | Leu | Gln | Ala | Leu | Arg | Val | Ala | Arg | Met |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Pro | Gly | Leu | Glu | Arg | Ser | Val | Arg | Glu | Arg | Phe | Leu | Pro | Val | His | |
| | | | 260 | | | | | 265 | | | | | 270 | | |
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| <210> 434 | | | | | | | | | | | | | | | |
| <211> 271 | | | | | | | | | | | | | | | |
| <212> PRT | | | | | | | | | | | | | | | |
| <213> Homo sapiens | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| <400> 434 | | | | | | | | | | | | | | | |
| Val | Ala | Glu | Thr | Pro | Thr | Tyr | Pro | Trp | Arg | Asp | Ala | Glu | Thr | Gly | Glu |
| | | | | | | | | | 10 | | | | | 15 | |
| | | | | 5 | | | | | | | | | | | |
| Arg | Leu | Val | Cys | Ala | Gln | Cys | Pro | Pro | Gly | Thr | Phe | Val | Gln | Arg | Pro |
| | | | | 20 | | | | | 25 | | | | | 30 | |
| Cys | Arg | Arg | Asp | Ser | Pro | Thr | Thr | Cys | Gly | Pro | Cys | Pro | Pro | Arg | His |
| | | | 35 | | | | 40 | | | | | 45 | | | |
| Tyr | Thr | Gln | Phe | Trp | Asn | Tyr | Leu | Glu | Arg | Cys | Arg | Tyr | Cys | Asn | Val |
| | | 50 | | | | 55 | | | | | 60 | | | | |
| Leu | Cys | Gly | Glu | Arg | Glu | Glu | Glu | Ala | Arg | Ala | Cys | His | Ala | Thr | His |
| | | 65 | | | | 70 | | | 75 | | | | | 80 | |
| Asn | Arg | Ala | Cys | Arg | Cys | Arg | Thr | Gly | Phe | Phe | Ala | His | Ala | Gly | Phe |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Cys | Leu | Glu | His | Ala | Ser | Cys | Pro | Pro | Gly | Ala | Gly | Val | Ile | Ala | Pro |
| | | | 100 | | | | 105 | | | | | 110 | | | |
| Gly | Thr | Pro | Ser | Gln | Asn | Thr | Gln | Cys | Gln | Pro | Cys | Pro | Pro | Gly | Thr |
| | | 115 | | | | | 120 | | | | | 125 | | | |

Phe Ser Ala Ser Ser Ser Ser Ser Glu Gln Cys Gln Pro His Arg Asn
130 135 140
Cys Thr Ala Leu Gly Leu Ala Leu Asn Val Pro Gly Ser Ser Ser His
145 150 155 160
Asp Thr Leu Cys Thr Ser Cys Thr Gly Phe Pro Leu Ser Thr Arg Val
165 170 175
Pro Gly Ala Glu Glu Cys Glu Arg Ala Val Ile Asp Phe Val Ala Phe
180 185 190
Gln Asp Ile Ser Ile Lys Arg Leu Gln Arg Leu Leu Gln Ala Leu Glu
195 200 205
Ala Pro Glu Gly Trp Gly Pro Thr Pro Arg Ala Gly Arg Ala Ala Leu
210 215 220
Gln Leu Lys Leu Arg Arg Arg Leu Thr Glu Leu Leu Gly Ala Gln Asp
225 230 235 240
Gly Ala Leu Leu Val Arg Leu Leu Gln Ala Leu Arg Val Ala Arg Met
245 250 255
Pro Gly Leu Glu Arg Ser Val Arg Glu Arg Phe Leu Pro Val His
260 265 270

<210> 435
<211> 271
<212> PRT
<213> Homo sapiens

<400> 435
Val Ala Glu Thr Pro Thr Tyr Pro Trp Arg Asp Ala Glu Thr Gly Glu
1 5 10 15
Arg Leu Val Cys Ala Gln Cys Pro Pro Gly Thr Phe Val Gln Arg Pro
20 25 30
Cys Arg Arg Asp Ser Pro Thr Thr Cys Gly Pro Cys Pro Pro Arg His
35 40 45
Tyr Thr Gln Phe Trp Asn Tyr Leu Glu Arg Cys Arg Tyr Cys Asn Val
50 55 60
Leu Cys Gly Glu Arg Glu Glu Glu Ala Arg Ala Cys His Ala Thr His
65 70 75 80
Asn Arg Ala Cys Arg Cys Arg Thr Gly Phe Phe Ala His Ala Gly Phe
85 90 95
Cys Leu Glu His Ala Ser Cys Pro Pro Gly Ala Gly Val Ile Ala Pro
100 105 110
Gly Thr Pro Ser Gln Asn Thr Gln Cys Gln Pro Cys Pro Pro Gly Thr
115 120 125
Phe Ser Ala Ser Ser Ser Ser Ser Glu Gln Cys Gln Pro His Arg Asn
130 135 140

Cys Thr Ala Leu Gly Leu Ala Leu Asn Val Pro Gly Ser Ser Ser His
 145 150 155 160
 Asp Thr Leu Cys Thr Ser Cys Thr Gly Phe Pro Leu Ser Thr Arg Val
 165 170 175
 Pro Gly Ala Glu Glu Cys Glu Arg Ala Val Ile Asp Phe Val Ala Phe
 180 185 190
 Gln Asp Ile Ser Ile Lys Arg Leu Gln Arg Leu Leu Gln Ala Leu Glu
 195 200 205
 Ala Pro Glu Gly Trp Gly Pro Thr Pro Arg Ala Gly Arg Ala Ala Leu
 210 215 220
 Gln Leu Lys Leu Arg Arg Arg Leu Thr Glu Leu Leu Gly Ala Gln Asp
 225 230 235 240
 Gly Ala Leu Leu Val Arg Leu Leu Gln Ala Leu Arg Val Ala Arg Met
 245 250 255
 Pro Gly Leu Glu Arg Ser Val Arg Glu Arg Phe Leu Pro Val His
 260 265 270

<210> 436
 <211> 271
 <212> PRT
 <213> Homo sapiens

<400> 436
 Val Ala Glu Thr Pro Thr Tyr Pro Trp Arg Asp Ala Glu Thr Gly Glu
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 Arg Leu Val Cys Ala Gln Cys Pro Pro Gly Thr Phe Val Gln Arg Pro
 20 25 30
 Cys Arg Arg Asp Ser Pro Thr Thr Cys Gly Pro Cys Pro Pro Arg His
 35 40 45
 Tyr Thr Gln Phe Trp Asn Tyr Leu Glu Arg Cys Arg Tyr Cys Asn Val
 50 55 60
 Leu Cys Gly Glu Arg Glu Glu Glu Ala Arg Ala Cys His Ala Thr His
 65 70 75 80
 Asn Arg Ala Cys Arg Cys Arg Thr Gly Phe Phe Ala His Ala Gly Phe
 85 90 95
 Cys Leu Glu His Ala Ser Cys Pro Pro Gly Ala Gly Val Ile Ala Pro
 100 105 110
 Gly Thr Pro Ser Gln Asn Thr Gln Cys Gln Pro Cys Pro Pro Gly Thr
 115 120 125
 Phe Ser Ala Ser Ser Ser Ser Ser Glu Gln Cys Gln Pro His Arg Asn
 130 135 140
 Cys Thr Ala Leu Gly Leu Ala Leu Asn Val Pro Gly Ser Ser Ser His
 145 150 155 160

Asp Thr Leu Cys Thr Ser Cys Thr Gly Phe Pro Leu Ser Thr Arg Val
 165 170 175
 Pro Gly Ala Glu Glu Cys Glu Arg Ala Val Ile Asp Phe Val Ala Phe
 180 185 190
 Gln Asp Ile Ser Ile Lys Arg Leu Gln Arg Leu Leu Gln Ala Leu Glu
 195 200 205
 Ala Pro Glu Gly Trp Gly Pro Thr Pro Arg Ala Gly Arg Ala Ala Leu
 210 215 220
 Gln Leu Lys Leu Arg Arg Arg Leu Thr Glu Leu Leu Gly Ala Gln Asp
 225 230 235 240
 Gly Ala Leu Leu Val Arg Leu Leu Gln Ala Leu Arg Val Ala Arg Met
 245 250 255
 Pro Gly Leu Glu Arg Ser Val Arg Glu Arg Phe Leu Pro Val His
 260 265 270
 <210> 437
 <211> 271
 <212> PRT
 <213> Homo sapiens
 <400> 437
 Val Ala Glu Thr Pro Thr Tyr Pro Trp Arg Asp Ala Glu Thr Gly Glu
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 Arg Leu Val Cys Ala Gln Cys Pro Pro Gly Thr Phe Val Gln Arg Pro
 20 25 30
 Cys Arg Arg Asp Ser Pro Thr Thr Cys Gly Pro Cys Pro Pro Arg His
 35 40 45
 Tyr Thr Gln Phe Trp Asn Tyr Leu Glu Arg Cys Arg Tyr Cys Asn Val
 50 55 60
 Leu Cys Gly Glu Arg Glu Glu Glu Ala Arg Ala Cys His Ala Thr His
 65 70 75 80
 Asn Arg Ala Cys Arg Cys Arg Thr Gly Phe Phe Ala His Ala Gly Phe
 85 90 95
 Cys Leu Glu His Ala Ser Cys Pro Pro Gly Ala Gly Val Ile Ala Pro
 100 105 110
 Gly Thr Pro Ser Gln Asn Thr Gln Cys Gln Pro Cys Pro Pro Gly Thr
 115 120 125
 Phe Ser Ala Ser Ser Ser Ser Ser Glu Gln Cys Gln Pro His Arg Asn
 130 135 140
 Cys Thr Ala Leu Gly Leu Ala Leu Asn Val Pro Gly Ser Ser Ser His
 145 150 155 160
 Asp Thr Leu Cys Thr Ser Cys Thr Gly Phe Pro Leu Ser Thr Arg Val
 165 170 175
 Pro Gly Ala Glu Glu Cys Glu Arg Ala Val Ile Asp Phe Val Ala Phe
 180 185 190

Gln Asp Ile Ser Ile Lys Arg Leu Gln Arg Leu Leu Gln Ala Leu Glu
 195 200 205
 Ala Pro Glu Gly Trp Gly Pro Thr Pro Arg Ala Gly Arg Ala Ala Leu
 210 215 220
 Gln Leu Lys Leu Arg Arg Arg Leu Thr Glu Leu Leu Gly Ala Gln Asp
 225 230 235 240
 Gly Ala Leu Leu Val Arg Leu Leu Gln Ala Leu Arg Val Ala Arg Met
 245 250 255
 Pro Gly Leu Glu Arg Ser Val Arg Glu Arg Phe Leu Pro Val His
 260 265 270

<210> 438
 <211> 271
 <212> PRT
 <213> Homo sapiens

<400> 438
 Val Ala Glu Thr Pro Thr Tyr Pro Trp Arg Asp Ala Glu Thr Gly Glu
 1 5 10 15
 Arg Leu Val Cys Ala Gln Cys Pro Pro Gly Thr Phe Val Gln Arg Pro
 20 25 30
 Cys Arg Arg Asp Ser Pro Thr Thr Cys Gly Pro Cys Pro Pro Arg His
 35 40 45
 Tyr Thr Gln Phe Trp Asn Tyr Leu Glu Arg Cys Arg Tyr Cys Asn Val
 50 55 60
 Leu Cys Gly Glu Arg Glu Glu Glu Ala Arg Ala Cys His Ala Thr His
 65 70 75 80
 Asn Arg Ala Cys Arg Cys Arg Thr Gly Phe Phe Ala His Ala Gly Phe
 85 90 95
 Cys Leu Glu His Ala Ser Cys Pro Pro Gly Ala Gly Val Ile Ala Pro
 100 105 110
 Gly Thr Pro Ser Gln Asn Thr Gln Cys Gln Pro Cys Pro Pro Gly Thr
 115 120 125
 Phe Ser Ala Ser Ser Ser Ser Ser Glu Gln Cys Gln Pro His Arg Asn
 130 135 140
 Cys Thr Ala Leu Gly Leu Ala Leu Asn Val Pro Gly Ser Ser Ser His
 145 150 155 160
 Asp Thr Leu Cys Thr Ser Cys Thr Gly Phe Pro Leu Ser Thr Arg Val
 165 170 175
 Pro Gly Ala Glu Glu Cys Glu Arg Ala Val Ile Asp Phe Val Ala Phe
 180 185 190
 Gln Asp Ile Ser Ile Lys Arg Leu Gln Arg Leu Leu Gln Ala Leu Glu
 195 200 205
 Ala Pro Glu Gly Trp Gly Pro Thr Pro Arg Ala Gly Arg Ala Ala Leu
 210 215 220

Gln Leu Lys Leu Arg Arg Arg Leu Thr Glu Leu Leu Gly Ala Gln Asp
 225 230 235 240
 Gly Ala Leu Leu Val Arg Leu Leu Gln Ala Leu Arg Val Ala Arg Met
 245 250 255
 Pro Gly Leu Glu Arg Ser Val Arg Glu Arg Phe Leu Pro Val His
 260 265 270

<210> 439
 <211> 300
 <212> PRT
 <213> Homo sapiens

<400> 439
 Met Arg Ala Leu Glu Gly Pro Gly Leu Ser Leu Leu Cys Leu Val Leu
 1 5 10 15
 Ala Leu Pro Ala Leu Leu Pro Val Pro Ala Val Arg Gly Val Ala Glu
 20 25 30
 Thr Pro Thr Tyr Pro Trp Arg Asp Ala Glu Thr Gly Glu Arg Leu Val
 35 40 45
 Cys Ala Gln Cys Pro Pro Gly Thr Phe Val Gln Arg Pro Cys Arg Arg
 50 55 60
 Asp Ser Pro Thr Thr Cys Gly Pro Cys Pro Pro Arg His Tyr Thr Gln
 65 70 75 80
 Phe Trp Asn Tyr Leu Glu Arg Cys Arg Tyr Cys Asn Val Leu Cys Gly
 85 90 95
 Glu Arg Glu Glu Glu Ala Arg Ala Cys His Ala Thr His Asn Arg Ala
 100 105 110
 Cys Arg Cys Arg Thr Gly Phe Phe Ala His Ala Gly Phe Cys Leu Glu
 115 120 125
 His Ala Ser Cys Pro Pro Gly Ala Gly Val Ile Ala Pro Gly Thr Pro
 130 135 140
 Ser Gln Asn Thr Gln Cys Gln Pro Cys Pro Pro Gly Thr Phe Ser Ala
 145 150 155 160
 Ser Ser Ser Ser Ser Glu Gln Cys Gln Pro His Arg Asn Cys Thr Ala
 165 170 175
 Leu Gly Leu Ala Leu Asn Val Pro Gly Ser Ser Ser His Asp Thr Leu
 180 185 190
 Cys Thr Ser Cys Thr Gly Phe Pro Leu Ser Thr Arg Val Pro Gly Ala
 195 200 205
 Glu Glu Cys Glu Arg Ala Val Ile Asp Phe Val Ala Phe Gln Asp Ile
 210 215 220
 Ser Ile Lys Arg Leu Gln Arg Leu Leu Gln Ala Leu Glu Ala Pro Glu
 225 230 235 240

Gly Ala Leu Leu Val Arg Leu Leu Gln Ala Leu Arg Val Ala Arg Met
245 250 255

Pro Gly Leu Glu Arg Ser Val Arg Glu Arg Phe Leu Pro Val His
260 265 270

<210> 441
<211> 204
<212> PRT
<213> Homo sapiens

<400> 441
Met Ala Gly Pro Ala Thr Gln Ser Pro Met Lys Leu Met Ala Leu Gln
1 5 10 15

Leu Leu Leu Trp His Ser Ala Leu Trp Thr Val Gln Glu Ala Thr Pro
20 25 30

Leu Gly Pro Ala Ser Ser Leu Pro Gln Ser Phe Leu Leu Lys Cys Leu
35 40 45

Glu Gln Val Arg Lys Ile Gln Gly Asp Gly Ala Ala Leu Gln Glu Lys
50 55 60

Leu Cys Ala Thr Tyr Lys Leu Cys His Pro Glu Glu Leu Val Leu Leu
65 70 75 80

Gly His Ser Leu Gly Ile Pro Trp Ala Pro Leu Ser Ser Cys Pro Ser
85 90 95

Gln Ala Leu Gln Leu Ala Gly Cys Leu Ser Gln Leu His Ser Gly Leu
100 105 110

Phe Leu Tyr Gln Gly Leu Leu Gln Ala Leu Glu Gly Ile Ser Pro Glu
115 120 125

Leu Gly Pro Thr Leu Asp Thr Leu Gln Leu Asp Val Ala Asp Phe Ala
130 135 140

Thr Thr Ile Trp Gln Gln Met Glu Glu Leu Gly Met Ala Pro Ala Leu
145 150 155 160

Gln Pro Thr Gln Gly Ala Met Pro Ala Phe Ala Ser Ala Phe Gln Arg
165 170 175

Arg Ala Gly Gly Val Leu Val Ala Ser His Leu Gln Ser Phe Leu Glu
180 185 190

Val Ser Tyr Arg Val Leu Arg His Leu Ala Gln Pro
195 200

<210> 442
<211> 204
<212> PRT
<213> Homo sapiens

<400> 442
Met Ala Gly Pro Ala Thr Gln Ser Pro Met Lys Leu Met Ala Leu Gln

| | | | |
|---|-----|-----|-----|
| 1 | 5 | 10 | 15 |
| Leu Leu Leu Trp His Ser Ala Leu Trp Thr Val Gln Glu Ala Thr Pro | 20 | 25 | 30 |
| Leu Gly Pro Ala Ser Ser Leu Pro Gln Ser Phe Leu Leu Lys Cys Leu | 35 | 40 | 45 |
| Glu Gln Val Arg Lys Ile Gln Gly Asp Gly Ala Ala Leu Gln Glu Lys | 50 | 55 | 60 |
| Leu Cys Ala Thr Tyr Lys Leu Cys His Pro Glu Glu Leu Val Leu Leu | 65 | 70 | 75 |
| Gly His Ser Leu Gly Ile Pro Trp Ala Pro Leu Ser Ser Cys Pro Ser | 85 | 90 | 95 |
| Gln Ala Leu Gln Leu Ala Gly Cys Leu Ser Gln Leu His Ser Gly Leu | 100 | 105 | 110 |
| Phe Leu Tyr Gln Gly Leu Leu Gln Ala Leu Glu Gly Ile Ser Pro Glu | 115 | 120 | 125 |
| Leu Gly Pro Thr Leu Asp Thr Leu Gln Leu Asp Val Ala Asp Phe Ala | 130 | 135 | 140 |
| Thr Thr Ile Trp Gln Gln Met Glu Glu Leu Gly Met Ala Pro Ala Leu | 145 | 150 | 155 |
| Gln Pro Thr Gln Gly Ala Met Pro Ala Phe Ala Ser Ala Phe Gln Arg | 165 | 170 | 175 |
| Arg Ala Gly Gly Val Leu Val Ala Ser His Leu Gln Ser Phe Leu Glu | 180 | 185 | 190 |
| Val Ser Tyr Arg Val Leu Arg His Leu Ala Gln Pro | 195 | 200 | |

<210> 443
 <211> 271
 <212> PRT
 <213> Homo sapiens

| |
|---|
| <400> 443 |
| Val Ala Glu Thr Pro Thr Tyr Pro Trp Arg Asp Ala Glu Thr Gly Glu |
| 1 5 10 15 |
| Arg Leu Val Cys Ala Gln Cys Pro Pro Gly Thr Phe Val Gln Arg Pro |
| 20 25 30 |
| Cys Arg Arg Asp Ser Pro Thr Thr Cys Gly Pro Cys Pro Pro Arg His |
| 35 40 45 |
| Tyr Thr Gln Phe Trp Asn Tyr Leu Glu Arg Cys Arg Tyr Cys Asn Val |
| 50 55 60 |
| Leu Cys Gly Glu Arg Glu Glu Glu Ala Arg Ala Cys His Ala Thr His |
| 65 70 75 80 |
| Asn Arg Ala Cys Arg Cys Arg Thr Gly Phe Phe Ala His Ala Gly Phe |
| 85 90 95 |

Cys Leu Glu His Ala Ser Cys Pro Pro Gly Ala Gly Val Ile Ala Pro
 100 105 110
 Gly Thr Pro Ser Gln Asn Thr Gln Cys Gln Pro Cys Pro Pro Gly Thr
 115 120 125
 Phe Ser Ala Ser Ser Ser Ser Ser Glu Gln Cys Gln Pro His Arg Asn
 130 135 140
 Cys Thr Ala Leu Gly Leu Ala Leu Asn Val Pro Gly Ser Ser Ser His
 145 150 155 160
 Asp Thr Leu Cys Thr Ser Cys Thr Gly Phe Pro Leu Ser Thr Arg Val
 165 170 175
 Pro Gly Ala Glu Glu Cys Glu Arg Ala Val Ile Asp Phe Val Ala Phe
 180 185 190
 Gln Asp Ile Ser Ile Lys Arg Leu Gln Arg Leu Leu Gln Ala Leu Glu
 195 200 205
 Ala Pro Glu Gly Trp Gly Pro Thr Pro Arg Ala Gly Arg Ala Ala Leu
 210 215 220
 Gln Leu Lys Leu Arg Arg Arg Leu Thr Glu Leu Leu Gly Ala Gln Asp
 225 230 235 240
 Gly Ala Leu Leu Val Arg Leu Leu Gln Ala Leu Arg Val Ala Arg Met
 245 250 255
 Pro Gly Leu Glu Arg Ser Val Arg Glu Arg Phe Leu Pro Val His
 260 265 270

<210> 444
 <211> 285
 <212> PRT
 <213> Homo sapiens

<400> 444
 Met Val Met Arg Pro Leu Trp Ser Leu Leu Leu Trp Glu Ala Leu Leu
 1 5 10 15
 Pro Ile Thr Val Thr Gly Ala Gln Val Leu Ser Lys Val Gly Gly Ser
 20 25 30
 Val Leu Leu Val Ala Ala Arg Pro Pro Gly Phe Gln Val Arg Glu Ala
 35 40 45
 Ile Trp Arg Ser Leu Trp Pro Ser Glu Glu Leu Leu Ala Thr Phe Phe
 50 55 60
 Arg Gly Ser Leu Glu Thr Leu Tyr His Ser Arg Phe Leu Gly Arg Ala
 65 70 75 80
 Gln Leu His Ser Asn Leu Ser Leu Glu Leu Gly Pro Leu Glu Ser Gly
 85 90 95
 Asp Ser Gly Asn Phe Ser Val Leu Met Val Asp Thr Arg Gly Gln Pro
 100 105 110
 Trp Thr Gln Thr Leu Gln Leu Lys Val Tyr Asp Ala Val Pro Arg Pro
 115 120 125

Val Val Gln Val Phe Ile Ala Val Glu Arg Asp Ala Gln Pro Ser Lys
 130 135 140
 Thr Cys Gln Val Phe Leu Ser Cys Trp Ala Pro Asn Ile Ser Glu Ile
 145 150 155 160
 Thr Tyr Ser Trp Arg Arg Glu Thr Thr Met Asp Phe Gly Met Glu Pro
 165 170 175
 His Ser Leu Phe Thr Asp Gly Gln Val Leu Ser Ile Ser Leu Gly Pro
 180 185 190
 Gly Asp Arg Asp Val Ala Tyr Ser Cys Ile Val Ser Asn Pro Val Ser
 195 200 205
 Trp Asp Leu Ala Thr Val Thr Pro Trp Asp Ser Cys His His Glu Ala
 210 215 220
 Ala Pro Gly Lys Ala Ser Tyr Lys Asp Val Leu Leu Val Val Val Pro
 225 230 235 240
 Val Ser Leu Leu Leu Met Leu Val Thr Leu Phe Ser Ala Trp His Trp
 245 250 255
 Cys Pro Cys Ser Gly Lys Lys Lys Lys Asp Val His Ala Asp Arg Val
 260 265 270
 Gly Pro Glu Thr Glu Asn Pro Leu Val Gln Asp Leu Pro
 275 280 285

<210> 445
 <211> 285
 <212> PRT
 <213> Homo sapiens

<400> 445
 Met Asp Asp Ser Thr Glu Arg Glu Gln Ser Arg Leu Thr Ser Cys Leu
 1 5 10 15
 Lys Lys Arg Glu Glu Met Lys Leu Lys Glu Cys Val Ser Ile Leu Pro
 20 25 30
 Arg Lys Glu Ser Pro Ser Val Arg Ser Ser Lys Asp Gly Lys Leu Leu
 35 40 45
 Ala Ala Thr Leu Leu Leu Ala Leu Leu Ser Cys Cys Leu Thr Val Val
 50 55 60
 Ser Phe Tyr Gln Val Ala Ala Leu Gln Gly Asp Leu Ala Ser Leu Arg
 65 70 75 80
 Ala Glu Leu Gln Gly His His Ala Glu Lys Leu Pro Ala Gly Ala Gly
 85 90 95
 Ala Pro Lys Ala Gly Leu Glu Glu Ala Pro Ala Val Thr Ala Gly Leu
 100 105 110
 Lys Ile Phe Glu Pro Pro Ala Pro Gly Glu Gly Asn Ser Ser Gln Asn
 115 120 125

Ser Arg Asn Lys Arg Ala Val Gln Gly Pro Glu Glu Thr Val Thr Gln
 130 135 140
 Asp Cys Leu Gln Leu Ile Ala Asp Ser Glu Thr Pro Thr Ile Gln Lys
 145 150 155 160
 Gly Ser Tyr Thr Phe Val Pro Trp Leu Leu Ser Phe Lys Arg Gly Ser
 165 170 175
 Ala Leu Glu Glu Lys Glu Asn Lys Ile Leu Val Lys Glu Thr Gly Tyr
 180 185 190
 Phe Phe Ile Tyr Gly Gln Val Leu Tyr Thr Asp Lys Thr Tyr Ala Met
 195 200 205
 Gly His Leu Ile Gln Arg Lys Lys Val His Val Phe Gly Asp Glu Leu
 210 215 220
 Ser Leu Val Thr Leu Phe Arg Cys Ile Gln Asn Met Pro Glu Thr Leu
 225 230 235 240
 Pro Asn Asn Ser Cys Tyr Ser Ala Gly Ile Ala Lys Leu Glu Glu Gly
 245 250 255
 Asp Glu Leu Gln Leu Ala Ile Pro Arg Glu Asn Ala Gln Ile Ser Leu
 260 265 270
 Asp Gly Asp Val Thr Phe Phe Gly Ala Leu Lys Leu Leu
 275 280 285

<210> 446
 <211> 120
 <212> PRT
 <213> Homo sapiens

<400> 446
 Met Lys Val Ser Val Ala Ala Leu Ser Cys Leu Met Leu Val Thr Ala
 1 5 10 15
 Leu Gly Ser Gln Ala Arg Val Thr Lys Asp Ala Glu Thr Glu Phe Met
 20 25 30
 Met Ser Lys Leu Pro Leu Glu Asn Pro Val Leu Leu Asp Arg Phe His
 35 40 45
 Ala Thr Ser Ala Asp Cys Cys Ile Ser Tyr Thr Pro Arg Ser Ile Pro
 50 55 60
 Cys Ser Leu Leu Glu Ser Tyr Phe Glu Thr Asn Ser Glu Cys Ser Lys
 65 70 75 80
 Pro Gly Val Ile Phe Leu Thr Lys Lys Gly Arg Arg Phe Cys Ala Asn
 85 90 95
 Pro Ser Asp Lys Gln Val Gln Val Cys Met Arg Met Leu Lys Leu Asp
 100 105 110
 Thr Arg Ile Lys Thr Arg Lys Asn
 115 120

<210> 447
 <211> 144
 <212> PRT
 <213> Homo sapiens

<400> 447
 Met Trp Leu Gln Ser Leu Leu Leu Leu Gly Thr Val Ala Cys Ser Ile
 1 5 10 15
 Ser Ala Pro Ala Arg Ser Pro Ser Pro Ser Thr Gln Pro Trp Glu His
 20 25 30
 Val Asn Ala Ile Gln Glu Ala Arg Arg Leu Leu Asn Leu Ser Arg Asp
 35 40 45
 Thr Ala Ala Glu Met Asn Glu Thr Val Glu Val Ile Ser Glu Met Phe
 50 55 60
 Asp Leu Gln Glu Pro Thr Cys Leu Gln Thr Arg Leu Glu Leu Tyr Lys
 65 70 75 80
 Gln Gly Leu Arg Gly Ser Leu Thr Lys Leu Lys Gly Pro Leu Thr Met
 85 90 95
 Met Ala Ser His Tyr Lys Gln His Cys Pro Pro Thr Pro Glu Thr Ser
 100 105 110
 Cys Ala Thr Gln Ile Ile Thr Phe Glu Ser Phe Lys Glu Asn Leu Lys
 115 120 125
 Asp Phe Leu Leu Val Ile Pro Phe Asp Cys Trp Glu Pro Val Gln Glu
 130 135 140

<210> 448
 <211> 144
 <212> PRT
 <213> Homo sapiens

<400> 448
 Met Trp Leu Gln Ser Leu Leu Leu Leu Gly Thr Val Ala Cys Ser Ile
 1 5 10 15
 Ser Ala Pro Ala Arg Ser Pro Ser Pro Ser Thr Gln Pro Trp Glu His
 20 25 30
 Val Asn Ala Ile Gln Glu Ala Arg Arg Leu Leu Asn Leu Ser Arg Asp
 35 40 45
 Thr Ala Ala Glu Met Asn Glu Thr Val Glu Val Ile Ser Glu Met Phe
 50 55 60
 Asp Leu Gln Glu Pro Thr Cys Leu Gln Thr Arg Leu Glu Leu Tyr Lys
 65 70 75 80
 Gln Gly Leu Arg Gly Ser Leu Thr Lys Leu Lys Gly Pro Leu Thr Met
 85 90 95
 Met Ala Ser His Tyr Lys Gln His Cys Pro Pro Thr Pro Glu Thr Ser

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 100 | | 105 | | 110 | | | | | | | | | | |
| Cys | Ala | Thr | Gln | Ile | Ile | Thr | Phe | Glu | Ser | Phe | Lys | Glu | Asn | Leu | Lys |
| | 115 | | | | | | 120 | | | | | 125 | | | |
| Asp | Phe | Leu | Leu | Val | Ile | Pro | Phe | Asp | Cys | Trp | Glu | Pro | Val | Gln | Glu |
| | 130 | | | | | 135 | | | | | 140 | | | | |

<210> 449
 <211> 271
 <212> PRT
 <213> Homo sapiens

| | | | | | | | | | | | | | | | | |
|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <400> 449 | Val | Ala | Glu | Thr | Pro | Thr | Tyr | Pro | Trp | Arg | Asp | Ala | Glu | Thr | Gly | Glu |
| | 1 | | | | 5 | | | | 10 | | | | | | 15 | |
| Arg | Leu | Val | Cys | Ala | Gln | Cys | Pro | Pro | Gly | Thr | Phe | Val | Gln | Arg | Pro | |
| | | | 20 | | | | | 25 | | | | | 30 | | | |
| Cys | Arg | Arg | Asp | Ser | Pro | Thr | Thr | Cys | Gly | Pro | Cys | Pro | Pro | Arg | His | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Tyr | Thr | Gln | Phe | Trp | Asn | Tyr | Leu | Glu | Arg | Cys | Arg | Tyr | Cys | Asn | Val | |
| | 50 | | | | 55 | | | | | | 60 | | | | | |
| Leu | Cys | Gly | Glu | Arg | Glu | Glu | Glu | Ala | Arg | Ala | Cys | His | Ala | Thr | His | |
| | 65 | | | | 70 | | | | | 75 | | | | | 80 | |
| Asn | Arg | Ala | Cys | Arg | Cys | Arg | Thr | Gly | Phe | Phe | Ala | His | Ala | Gly | Phe | |
| | | | | 85 | | | | | 90 | | | | | 95 | | |
| Cys | Leu | Glu | His | Ala | Ser | Cys | Pro | Pro | Gly | Ala | Gly | Val | Ile | Ala | Pro | |
| | | | 100 | | | | | 105 | | | | | 110 | | | |
| Gly | Thr | Pro | Ser | Gln | Asn | Thr | Gln | Cys | Gln | Pro | Cys | Pro | Pro | Gly | Thr | |
| | | 115 | | | | | 120 | | | | | 125 | | | | |
| Phe | Ser | Ala | Ser | Ser | Ser | Ser | Ser | Glu | Gln | Cys | Gln | Pro | His | Arg | Asn | |
| | 130 | | | | | 135 | | | | | 140 | | | | | |
| Cys | Thr | Ala | Leu | Gly | Leu | Ala | Leu | Asn | Val | Pro | Gly | Ser | Ser | Ser | His | |
| | 145 | | | | 150 | | | | | 155 | | | | | 160 | |
| Asp | Thr | Leu | Cys | Thr | Ser | Cys | Thr | Gly | Phe | Pro | Leu | Ser | Thr | Arg | Val | |
| | | | | 165 | | | | | 170 | | | | | 175 | | |
| Pro | Gly | Ala | Glu | Glu | Cys | Glu | Arg | Ala | Val | Ile | Asp | Phe | Val | Ala | Phe | |
| | | 180 | | | | | | 185 | | | | | 190 | | | |
| Gln | Asp | Ile | Ser | Ile | Lys | Arg | Leu | Gln | Arg | Leu | Leu | Gln | Ala | Leu | Glu | |
| | 195 | | | | | | 200 | | | | | 205 | | | | |
| Ala | Pro | Glu | Gly | Trp | Gly | Pro | Thr | Pro | Arg | Ala | Gly | Arg | Ala | Ala | Leu | |
| | 210 | | | | | 215 | | | | | 220 | | | | | |
| Gln | Leu | Lys | Leu | Arg | Arg | Arg | Leu | Thr | Glu | Leu | Leu | Gly | Ala | Gln | Asp | |
| | 225 | | | | 230 | | | | | 235 | | | | | 240 | |
| Gly | Ala | Leu | Leu | Val | Arg | Leu | Leu | Gln | Ala | Leu | Arg | Val | Ala | Arg | Met | |
| | | | | 245 | | | | 250 | | | | | | 255 | | |

Pro Gly Leu Glu Arg Ser Val Arg Glu Arg Phe Leu Pro Val His
260 265 270

<210> 450
<211> 271
<212> PRT
<213> Homo sapiens

<400> 450
Val Ala Glu Thr Pro Thr Tyr Pro Trp Arg Asp Ala Glu Thr Gly Glu
1 5 10 15
Arg Leu Val Cys Ala Gln Cys Pro Pro Gly Thr Phe Val Gln Arg Pro
20 25 30
Cys Arg Arg Asp Ser Pro Thr Thr Cys Gly Pro Cys Pro Pro Arg His
35 40 45
Tyr Thr Gln Phe Trp Asn Tyr Leu Glu Arg Cys Arg Tyr Cys Asn Val
50 55 60
Leu Cys Gly Glu Arg Glu Glu Glu Ala Arg Ala Cys His Ala Thr His
65 70 75 80
Asn Arg Ala Cys Arg Cys Arg Thr Gly Phe Phe Ala His Ala Gly Phe
85 90 95
Cys Leu Glu His Ala Ser Cys Pro Pro Gly Ala Gly Val Ile Ala Pro
100 105 110
Gly Thr Pro Ser Gln Asn Thr Gln Cys Gln Pro Cys Pro Pro Gly Thr
115 120 125
Phe Ser Ala Ser Ser Ser Ser Ser Glu Gln Cys Gln Pro His Arg Asn
130 135 140
Cys Thr Ala Leu Gly Leu Ala Leu Asn Val Pro Gly Ser Ser Ser His
145 150 155 160
Asp Thr Leu Cys Thr Ser Cys Thr Gly Phe Pro Leu Ser Thr Arg Val
165 170 175
Pro Gly Ala Glu Glu Cys Glu Arg Ala Val Ile Asp Phe Val Ala Phe
180 185 190
Gln Asp Ile Ser Ile Lys Arg Leu Gln Arg Leu Leu Gln Ala Leu Glu
195 200 205
Ala Pro Glu Gly Trp Gly Pro Thr Pro Arg Ala Gly Arg Ala Ala Leu
210 215 220
Gln Leu Lys Leu Arg Arg Arg Leu Thr Glu Leu Leu Gly Ala Gln Asp
225 230 235 240
Gly Ala Leu Leu Val Arg Leu Leu Gln Ala Leu Arg Val Ala Arg Met
245 250 255
Pro Gly Leu Glu Arg Ser Val Arg Glu Arg Phe Leu Pro Val His
260 265 270

<210> 451
 <211> 271
 <212> PRT
 <213> Homo sapiens

<400> 451
 Val Ala Glu Thr Pro Thr Tyr Pro Trp Arg Asp Ala Glu Thr Gly Glu
 1 5 10 15
 Arg Leu Val Cys Ala Gln Cys Pro Pro Gly Thr Phe Val Gln Arg Pro
 20 25 30
 Cys Arg Arg Asp Ser Pro Thr Thr Cys Gly Pro Cys Pro Pro Arg His
 35 40 45
 Tyr Thr Gln Phe Trp Asn Tyr Leu Glu Arg Cys Arg Tyr Cys Asn Val
 50 55 60
 Leu Cys Gly Glu Arg Glu Glu Glu Ala Arg Ala Cys His Ala Thr His
 65 70 75 80
 Asn Arg Ala Cys Arg Cys Arg Thr Gly Phe Phe Ala His Ala Gly Phe
 85 90 95
 Cys Leu Glu His Ala Ser Cys Pro Pro Gly Ala Gly Val Ile Ala Pro
 100 105 110
 Gly Thr Pro Ser Gln Asn Thr Gln Cys Gln Pro Cys Pro Pro Gly Thr
 115 120 125
 Phe Ser Ala Ser Ser Ser Ser Ser Glu Gln Cys Gln Pro His Arg Asn
 130 135 140
 Cys Thr Ala Leu Gly Leu Ala Leu Asn Val Pro Gly Ser Ser Ser His
 145 150 155 160
 Asp Thr Leu Cys Thr Ser Cys Thr Gly Phe Pro Leu Ser Thr Arg Val
 165 170 175
 Pro Gly Ala Glu Glu Cys Glu Arg Ala Val Ile Asp Phe Val Ala Phe
 180 185 190
 Gln Asp Ile Ser Ile Lys Arg Leu Gln Arg Leu Leu Gln Ala Leu Glu
 195 200 205
 Ala Pro Glu Gly Trp Gly Pro Thr Pro Arg Ala Gly Arg Ala Ala Leu
 210 215 220
 Gln Leu Lys Leu Arg Arg Arg Leu Thr Glu Leu Leu Gly Ala Gln Asp
 225 230 235 240
 Gly Ala Leu Leu Val Arg Leu Leu Gln Ala Leu Arg Val Ala Arg Met
 245 250 255
 Pro Gly Leu Glu Arg Ser Val Arg Glu Arg Phe Leu Pro Val His
 260 265 270

<210> 452

<211> 300
 <212> PRT
 <213> Homo sapiens

<400> 452

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Arg | Ala | Leu | Glu | Gly | Pro | Gly | Leu | Ser | Leu | Leu | Cys | Leu | Val | Leu |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Ala | Leu | Pro | Ala | Leu | Leu | Pro | Val | Pro | Ala | Val | Arg | Gly | Val | Ala | Glu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Thr | Pro | Thr | Tyr | Pro | Trp | Arg | Asp | Ala | Glu | Thr | Gly | Glu | Arg | Leu | Val |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Cys | Ala | Gln | Cys | Pro | Pro | Gly | Thr | Phe | Val | Gln | Arg | Pro | Cys | Arg | Arg |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Asp | Ser | Pro | Thr | Thr | Cys | Gly | Pro | Cys | Pro | Pro | Arg | His | Tyr | Thr | Gln |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| Phe | Trp | Asn | Tyr | Leu | Glu | Arg | Cys | Arg | Tyr | Cys | Asn | Val | Leu | Cys | Gly |
| | | | 85 | | | | | | 90 | | | | | 95 | |
| Glu | Arg | Glu | Glu | Glu | Ala | Arg | Ala | Cys | His | Ala | Thr | His | Asn | Arg | Ala |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Cys | Arg | Cys | Arg | Thr | Gly | Phe | Phe | Ala | His | Ala | Gly | Phe | Cys | Leu | Glu |
| | | 115 | | | | 120 | | | | | | 125 | | | |
| His | Ala | Ser | Cys | Pro | Pro | Gly | Ala | Gly | Val | Ile | Ala | Pro | Gly | Thr | Pro |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Ser | Gln | Asn | Thr | Gln | Cys | Gln | Pro | Cys | Pro | Pro | Gly | Thr | Phe | Ser | Ala |
| 145 | | | | 150 | | | | | | 155 | | | | | 160 |
| Ser | Ser | Ser | Ser | Ser | Glu | Gln | Cys | Gln | Pro | His | Arg | Asn | Cys | Thr | Ala |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Leu | Gly | Leu | Ala | Leu | Asn | Val | Pro | Gly | Ser | Ser | Ser | His | Asp | Thr | Leu |
| | | 180 | | | | | | 185 | | | | | 190 | | |
| Cys | Thr | Ser | Cys | Thr | Gly | Phe | Pro | Leu | Ser | Thr | Arg | Val | Pro | Gly | Ala |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Glu | Glu | Cys | Glu | Arg | Ala | Val | Ile | Asp | Phe | Val | Ala | Phe | Gln | Asp | Ile |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Ser | Ile | Lys | Arg | Leu | Gln | Arg | Leu | Leu | Gln | Ala | Leu | Glu | Ala | Pro | Glu |
| 225 | | | | 230 | | | | | | 235 | | | | | 240 |
| Gly | Trp | Gly | Pro | Thr | Pro | Arg | Ala | Gly | Arg | Ala | Ala | Leu | Gln | Leu | Lys |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Leu | Arg | Arg | Arg | Leu | Thr | Glu | Leu | Leu | Gly | Ala | Gln | Asp | Gly | Ala | Leu |
| | | | 260 | | | | 265 | | | | | | 270 | | |
| Leu | Val | Arg | Leu | Leu | Gln | Ala | Leu | Arg | Val | Ala | Arg | Met | Pro | Gly | Leu |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Glu | Arg | Ser | Val | Arg | Glu | Arg | Phe | Leu | Pro | Val | His | | | | |
| | 290 | | | | | 295 | | | | | 300 | | | | |

<210> 453
 <211> 207
 <212> PRT
 <213> Homo sapiens

<400> 453
 Met Ser Thr Lys Pro Asp Met Ile Gln Lys Cys Leu Trp Leu Glu Ile
 1 5 10 15
 Leu Met Gly Ile Phe Ile Ala Gly Thr Leu Ser Leu Asp Cys Asn Leu
 20 25 30
 Leu Asn Val His Leu Arg Arg Val Thr Trp Gln Asn Leu Arg His Leu
 35 40 45
 Ser Ser Met Ser Asn Ser Phe Pro Val Glu Cys Leu Arg Glu Asn Ile
 50 55 60
 Ala Phe Glu Leu Pro Gln Glu Phe Leu Gln Tyr Thr Gln Pro Met Lys
 65 70 75 80
 Arg Asp Ile Lys Lys Ala Phe Tyr Glu Met Ser Leu Gln Ala Phe Asn
 85 90 95
 Ile Phe Ser Gln His Thr Phe Lys Tyr Trp Lys Glu Arg His Leu Lys
 100 105 110
 Gln Ile Gln Ile Gly Leu Asp Gln Gln Ala Glu Tyr Leu Asn Gln Cys
 115 120 125
 Leu Glu Glu Asp Glu Asn Glu Asn Glu Asp Met Lys Glu Met Lys Glu
 130 135 140
 Asn Glu Met Lys Pro Ser Glu Ala Arg Val Pro Gln Leu Ser Ser Leu
 145 150 155 160
 Glu Leu Arg Arg Tyr Phe His Arg Ile Asp Asn Phe Leu Lys Glu Lys
 165 170 175
 Lys Tyr Ser Asp Cys Ala Trp Glu Ile Val Arg Val Glu Ile Arg Arg
 180 185 190
 Cys Leu Tyr Tyr Phe Tyr Lys Phe Thr Ala Leu Phe Arg Arg Lys
 195 200 205

<210> 454
 <211> 108
 <212> PRT
 <213> Homo sapiens

<400> 454
 Met Pro Leu Trp Val Phe Phe Phe Val Ile Leu Thr Leu Ser Asn Ser
 1 5 10 15
 Ser His Cys Ser Pro Pro Pro Pro Leu Thr Leu Arg Met Arg Arg Tyr
 20 25 30
 Ala Asp Ala Ile Phe Thr Asn Ser Tyr Arg Lys Val Leu Gly Gln Leu

35 40 45
 Ser Ala Arg Lys Leu Leu Gln Asp Ile Met Ser Arg Gln Gln Gly Glu
 50 55 60
 Ser Asn Gln Glu Arg Gly Ala Arg Ala Arg Leu Gly Arg Gln Val Asp
 65 70 75 80
 Ser Met Trp Ala Glu Gln Lys Gln Met Glu Leu Glu Ser Ile Leu Val
 85 90 95
 Ala Leu Leu Gln Lys His Ser Arg Asn Ser Gln Gly
 100 105

<210> 455
 <211> 44
 <212> PRT
 <213> Homo sapiens

<400> 455
 Tyr Ala Asp Ala Ile Phe Thr Asn Ser Tyr Arg Lys Val Leu Gly Gln
 1 5 10 15
 Leu Ser Ala Arg Lys Leu Leu Gln Asp Ile Met Ser Arg Gln Gln Gly
 20 25 30
 Glu Ser Asn Gln Glu Arg Gly Ala Arg Ala Arg Leu
 35 40

<210> 456
 <211> 34
 <212> PRT
 <213> Homo sapiens

<400> 456
 Ser Val Ser Glu Ile Gln Leu Met His Asn Leu Gly Lys His Leu Asn
 1 5 10 15
 Ser Met Glu Arg Val Glu Trp Leu Arg Lys Lys Leu Gln Asp Val His
 20 25 30
 Asn Phe

<210> 457
 <211> 34
 <212> PRT
 <213> Homo sapiens

<400> 457
 Ser Val Ser Glu Ile Gln Leu Met His Asn Leu Gly Lys His Leu Asn
 1 5 10 15
 Ser Met Glu Arg Val Glu Trp Leu Arg Lys Lys Leu Gln Asp Val His

20 25 30

Asn Phe

<210> 458
 <211> 153
 <212> PRT
 <213> Homo sapiens

<400> 458
 Met Tyr Arg Met Gln Leu Leu Ser Cys Ile Ala Leu Ser Leu Ala Leu
 1 5 10 15
 Val Thr Asn Ser Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu
 20 25 30
 Gln Leu Glu His Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile
 35 40 45
 Asn Asn Tyr Lys Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe
 50 55 60
 Tyr Met Pro Lys Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu
 65 70 75 80
 Glu Glu Leu Lys Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys
 85 90 95
 Asn Phe His Leu Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile
 100 105 110
 Val Leu Glu Leu Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala
 115 120 125
 Asp Glu Thr Ala Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe
 130 135 140
 Cys Gln Ser Ile Ile Ser Thr Leu Thr
 145 150

<210> 459
 <211> 153
 <212> PRT
 <213> Homo sapiens

<400> 459
 Met Tyr Arg Met Gln Leu Leu Ser Cys Ile Ala Leu Ser Leu Ala Leu
 1 5 10 15
 Val Thr Asn Ser Ala Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu
 20 25 30
 Gln Leu Glu His Leu Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile
 35 40 45
 Asn Asn Tyr Lys Asn Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe

| | | | | |
|---|-----|-----|-----|-----|
| 50 | | 55 | | 60 |
| Tyr Met Pro Lys Lys Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu | | | | |
| 65 | | 70 | | 80 |
| Glu Glu Leu Lys Pro Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys | | | | |
| | 85 | | 90 | 95 |
| Asn Phe His Leu Arg Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile | | | | |
| | 100 | | 105 | 110 |
| Val Leu Glu Leu Lys Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala | | | | |
| | 115 | | 120 | 125 |
| Asp Glu Thr Ala Thr Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe | | | | |
| | 130 | | 135 | 140 |
| Cys Gln Ser Ile Ile Ser Thr Leu Thr | | | | |
| 145 | | 150 | | |

<210> 460
 <211> 193
 <212> PRT
 <213> Homo sapiens

| |
|---|
| <400> 460 |
| Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu |
| 1 5 10 15 |
| Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala Pro Pro Arg Leu |
| 20 25 30 |
| Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu |
| 35 40 45 |
| Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu |
| 50 55 60 |
| Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg |
| 65 70 75 80 |
| Met Glu Val Gly Gln Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu |
| 85 90 95 |
| Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser |
| 100 105 110 |
| Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly |
| 115 120 125 |
| Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Arg Ala Gln Lys Glu |
| 130 135 140 |
| Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile |
| 145 150 155 160 |
| Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu |
| 165 170 175 |
| Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp |

180 185 190

Arg

<210> 461
 <211> 193
 <212> PRT
 <213> Homo sapiens

<400> 461
 Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu
 1 5 10 15
 Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala Pro Pro Arg Leu
 20 25 30
 Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu
 35 40 45
 Ala Glu Asn Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu
 50 55 60
 Asn Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg
 65 70 75 80
 Met Glu Val Gly Gln Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu
 85 90 95
 Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Asn Ser Ser
 100 105 110
 Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly
 115 120 125
 Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Arg Ala Gln Lys Glu
 130 135 140
 Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile
 145 150 155 160
 Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu
 165 170 175
 Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp
 180 185 190

Arg

<210> 462
 <211> 461
 <212> PRT
 <213> Homo sapiens

<400> 462
 Met Ala Pro Val Ala Val Trp Ala Ala Leu Ala Val Gly Leu Glu Leu

| 1 | 5 | 10 | 15 | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Ala | Ala | Ala | His | Ala | Leu | Pro | Ala | Gln | Val | Ala | Phe | Thr | Pro | Tyr |
| | | 20 | | | | | | 25 | | | | | 30 | | |
| Ala | Pro | Glu | Pro | Gly | Ser | Thr | Cys | Arg | Leu | Arg | Glu | Tyr | Tyr | Asp | Gln |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Thr | Ala | Gln | Met | Cys | Cys | Ser | Lys | Cys | Ser | Pro | Gly | Gln | His | Ala | Lys |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Val | Phe | Cys | Thr | Lys | Thr | Ser | Asp | Thr | Val | Cys | Asp | Ser | Cys | Glu | Asp |
| | 65 | | | | 70 | | | | | 75 | | | | 80 | |
| Ser | Thr | Tyr | Thr | Gln | Leu | Trp | Asn | Trp | Val | Pro | Glu | Cys | Leu | Ser | Cys |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Gly | Ser | Arg | Cys | Ser | Ser | Asp | Gln | Val | Glu | Thr | Gln | Ala | Cys | Thr | Arg |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Glu | Gln | Asn | Arg | Ile | Cys | Thr | Cys | Arg | Pro | Gly | Trp | Tyr | Cys | Ala | Leu |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Ser | Lys | Gln | Glu | Gly | Cys | Arg | Leu | Cys | Ala | Pro | Leu | Arg | Lys | Cys | Arg |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Pro | Gly | Phe | Gly | Val | Ala | Arg | Pro | Gly | Thr | Glu | Thr | Ser | Asp | Val | Val |
| | 145 | | | | 150 | | | | | 155 | | | | | 160 |
| Cys | Lys | Pro | Cys | Ala | Pro | Gly | Thr | Phe | Ser | Asn | Thr | Thr | Ser | Ser | Thr |
| | | | | 165 | | | | 170 | | | | | | 175 | |
| Asp | Ile | Cys | Arg | Pro | His | Gln | Ile | Cys | Asn | Val | Val | Ala | Ile | Pro | Gly |
| | | | 180 | | | | | 185 | | | | | 190 | | |
| Asn | Ala | Ser | Met | Asp | Ala | Val | Cys | Thr | Ser | Thr | Ser | Pro | Thr | Arg | Ser |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Met | Ala | Pro | Gly | Ala | Val | His | Leu | Pro | Gln | Pro | Val | Ser | Thr | Arg | Ser |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Gln | His | Thr | Gln | Pro | Thr | Pro | Glu | Pro | Ser | Thr | Ala | Pro | Ser | Thr | Ser |
| | 225 | | | | 230 | | | | | 235 | | | | | 240 |
| Phe | Leu | Leu | Pro | Met | Gly | Pro | Ser | Pro | Pro | Ala | Glu | Gly | Ser | Thr | Gly |
| | | | | 245 | | | | | 250 | | | | | 255 | |
| Asp | Phe | Ala | Leu | Pro | Val | Gly | Leu | Ile | Val | Gly | Val | Thr | Ala | Leu | Gly |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| Leu | Leu | Ile | Ile | Gly | Val | Val | Asn | Cys | Val | Ile | Met | Thr | Gln | Val | Lys |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Lys | Lys | Pro | Leu | Cys | Leu | Gln | Arg | Glu | Ala | Lys | Val | Pro | His | Leu | Pro |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Ala | Asp | Lys | Ala | Arg | Gly | Thr | Gln | Gly | Pro | Glu | Gln | Gln | His | Leu | Leu |
| | 305 | | | | 310 | | | | | 315 | | | | | 320 |
| Ile | Thr | Ala | Pro | Ser | Ser | Ser | Ser | Ser | Ser | Leu | Glu | Ser | Ser | Ala | Ser |
| | | | | 325 | | | | | 330 | | | | | 335 | |
| Ala | Leu | Asp | Arg | Arg | Ala | Pro | Thr | Arg | Asn | Gln | Pro | Gln | Ala | Pro | Gly |

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| | 340 | | 345 | | 350 | |
| Val | Glu | Ala | Ser | Gly | Ala | Gly |
| | 355 | | | | 360 | |
| Val | Glu | Ala | Ser | Gly | Ala | Ser |
| | 355 | | | | 365 | |
| Asp | Ser | Ser | Pro | Gly | Gly | His |
| | 370 | | | | 375 | |
| Val | Asn | Val | Cys | Ser | Ser | Ser |
| | 385 | | | 390 | | 395 |
| Ala | Ser | Ser | Thr | Met | Gly | Asp |
| | | | | 405 | | 410 |
| Lys | Asp | Glu | Gln | Val | Pro | Phe |
| | | | | | | 425 |
| Gln | Leu | Glu | Thr | Pro | Glu | Thr |
| | | | | | | 440 |
| Leu | Pro | Leu | Gly | Val | Pro | Asp |
| | | | | | | 455 |

<210> 463
 <211> 166
 <212> PRT
 <213> Homo sapiens

| | | | | | | | | | | | | | | | |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <400> | 463 | | | | | | | | | | | | | | |
| Met | Ser | Tyr | Asn | Leu | Leu | Gly | Phe | Leu | Gln | Arg | Ser | Ser | Asn | Phe | Gln |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Cys | Gln | Lys | Leu | Leu | Trp | Gln | Leu | Asn | Gly | Arg | Leu | Glu | Tyr | Cys | Leu |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Lys | Asp | Arg | Met | Asn | Phe | Asp | Ile | Pro | Glu | Glu | Ile | Lys | Gln | Leu | Gln |
| | 35 | | | | | | 40 | | | | | 45 | | | |
| Gln | Phe | Gln | Lys | Glu | Asp | Ala | Ala | Leu | Thr | Ile | Tyr | Glu | Met | Leu | Gln |
| | 50 | | | | | 55 | | | | | 60 | | | | |
| Asn | Ile | Phe | Ala | Ile | Phe | Arg | Gln | Asp | Ser | Ser | Ser | Thr | Gly | Trp | Asn |
| | 65 | | | | 70 | | | | | 75 | | | | | 80 |
| Glu | Thr | Ile | Val | Glu | Asn | Leu | Leu | Ala | Asn | Val | Tyr | His | Gln | Ile | Asn |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| His | Leu | Lys | Thr | Val | Leu | Glu | Glu | Lys | Leu | Glu | Lys | Glu | Asp | Phe | Thr |
| | | | 100 | | | | | 105 | | | | | 110 | | |
| Arg | Gly | Lys | Leu | Met | Ser | Ser | Leu | His | Leu | Lys | Arg | Tyr | Tyr | Gly | Arg |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Ile | Leu | His | Tyr | Leu | Lys | Ala | Lys | Glu | Tyr | Ser | His | Cys | Ala | Trp | Thr |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Ile | Val | Arg | Val | Glu | Ile | Leu | Arg | Asn | Phe | Tyr | Phe | Ile | Asn | Arg | Leu |
| | 145 | | | | 150 | | | | | 155 | | | | | 160 |
| Thr | Gly | Tyr | Leu | Arg | Asn | | | | | | | | | | |

165

<210> 464
<211> 166
<212> PRT
<213> Homo sapiens

<400> 464
Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln
1 5 10 15
Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
20 25 30
Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
35 40 45
Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
50 55 60
Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
65 70 75 80
Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
85 90 95
His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
100 105 110
Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
115 120 125
Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser His Cys Ala Trp Thr
130 135 140
Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
145 150 155 160
Thr Gly Tyr Leu Arg Asn
165

<210> 465
<211> 193
<212> PRT
<213> Homo sapiens

<400> 465
Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Ser Leu
1 5 10 15
Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala Pro Pro Arg Leu
20 25 30
Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu
35 40 45
Ala Glu Ser Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu

| 50 | 55 | 60 |
|---|-----|---------|
| Ser Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg | | |
| 65 | 70 | 75 80 |
| Met Glu Val Gly Gln Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu | | |
| | 85 | 90 95 |
| Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Ser Ser Ser | | |
| | 100 | 105 110 |
| Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly | | |
| | 115 | 120 125 |
| Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Arg Ala Gln Lys Glu | | |
| | 130 | 135 140 |
| Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile | | |
| 145 | 150 | 155 160 |
| Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu | | |
| | 165 | 170 175 |
| Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp | | |
| | 180 | 185 190 |
| Arg | | |

<210> 466
 <211> 193
 <212> PRT
 <213> Homo sapiens

| | | | | | | | | | | | | | | | | |
|---|--|-----|-----|----|--|-----|-----|----|--|----|--|-----|-----|----|--|----|
| <400> 466 | | | | | | | | | | | | | | | | |
| Met Gly Val His Glu Cys Pro Ala Trp Leu Trp Leu Leu Leu Ser Leu | | | | | | | | | | | | | | | | |
| 1 | | | | 5 | | | | 10 | | | | | | 15 | | |
| Leu Ser Leu Pro Leu Gly Leu Pro Val Leu Gly Ala Pro Pro Arg Leu | | | | | | | | | | | | | | | | |
| | | | 20 | | | | 25 | | | | | | 30 | | | |
| Ile Cys Asp Ser Arg Val Leu Glu Arg Tyr Leu Leu Glu Ala Lys Glu | | | | | | | | | | | | | | | | |
| | | 35 | | | | | 40 | | | | | 45 | | | | |
| Ala Glu Ser Ile Thr Thr Gly Cys Ala Glu His Cys Ser Leu Asn Glu | | | | | | | | | | | | | | | | |
| | | 50 | | | | 55 | | | | 60 | | | | | | |
| Ser Ile Thr Val Pro Asp Thr Lys Val Asn Phe Tyr Ala Trp Lys Arg | | | | | | | | | | | | | | | | |
| 65 | | | | 70 | | | | 75 | | | | | | | | 80 |
| Met Glu Val Gly Gln Gln Ala Val Glu Val Trp Gln Gly Leu Ala Leu | | | | | | | | | | | | | | | | |
| | | | 85 | | | | | 90 | | | | | | 95 | | |
| Leu Ser Glu Ala Val Leu Arg Gly Gln Ala Leu Leu Val Ser Ser Ser | | | | | | | | | | | | | | | | |
| | | | 100 | | | | 105 | | | | | | 110 | | | |
| Gln Pro Trp Glu Pro Leu Gln Leu His Val Asp Lys Ala Val Ser Gly | | | | | | | | | | | | | | | | |
| | | 115 | | | | 120 | | | | | | 125 | | | | |
| Leu Arg Ser Leu Thr Thr Leu Leu Arg Ala Leu Arg Ala Gln Lys Glu | | | | | | | | | | | | | | | | |

| | | | | | |
|---|-----|-----|-----|-----|-----|
| 130 | | 135 | | 140 | |
| Ala Ile Ser Pro Pro Asp Ala Ala Ser Ala Ala Pro Leu Arg Thr Ile | | | | | |
| 145 | | 150 | | 155 | 160 |
| Thr Ala Asp Thr Phe Arg Lys Leu Phe Arg Val Tyr Ser Asn Phe Leu | | | | | |
| | 165 | | 170 | | 175 |
| Arg Gly Lys Leu Lys Leu Tyr Thr Gly Glu Ala Cys Arg Thr Gly Asp | | | | | |
| | 180 | | 185 | | 190 |
| Arg | | | | | |

<210> 467
 <211> 461
 <212> PRT
 <213> Homo sapiens

| | |
|---|-----------------|
| <400> 467 | |
| Met Ala Pro Val Ala Val Trp Ala Ala Leu Ala Val Gly Leu Glu Leu | |
| 1 | 5 10 15 |
| Trp Ala Ala Ala His Ala Leu Pro Ala Gln Val Ala Phe Thr Pro Tyr | |
| | 20 25 30 |
| Ala Pro Glu Pro Gly Ser Thr Cys Arg Leu Arg Glu Tyr Tyr Asp Gln | |
| | 35 40 45 |
| Thr Ala Gln Met Cys Cys Ser Lys Cys Ser Pro Gly Gln His Ala Lys | |
| | 50 55 60 |
| Val Phe Cys Thr Lys Thr Ser Asp Thr Val Cys Asp Ser Cys Glu Asp | |
| | 65 70 75 80 |
| Ser Thr Tyr Thr Gln Leu Trp Asn Trp Val Pro Glu Cys Leu Ser Cys | |
| | 85 90 95 |
| Gly Ser Arg Cys Ser Ser Asp Gln Val Glu Thr Gln Ala Cys Thr Arg | |
| | 100 105 110 |
| Glu Gln Asn Arg Ile Cys Thr Cys Arg Pro Gly Trp Tyr Cys Ala Leu | |
| | 115 120 125 |
| Ser Lys Gln Glu Gly Cys Arg Leu Cys Ala Pro Leu Arg Lys Cys Arg | |
| | 130 135 140 |
| Pro Gly Phe Gly Val Ala Arg Pro Gly Thr Glu Thr Ser Asp Val Val | |
| | 145 150 155 160 |
| Cys Lys Pro Cys Ala Pro Gly Thr Phe Ser Asn Thr Thr Ser Ser Thr | |
| | 165 170 175 |
| Asp Ile Cys Arg Pro His Gln Ile Cys Asn Val Val Ala Ile Pro Gly | |
| | 180 185 190 |
| Asn Ala Ser Met Asp Ala Val Cys Thr Ser Thr Ser Pro Thr Arg Ser | |
| | 195 200 205 |
| Met Ala Pro Gly Ala Val His Leu Pro Gln Pro Val Ser Thr Arg Ser | |

| 210 | 215 | 220 |
|---|-----|-------------|
| Gln His Thr Gln Pro Thr Pro Glu Pro Ser Thr Ala Pro Ser Thr Ser | | |
| 225 | 230 | 235 240 |
| Phe Leu Leu Pro Met Gly Pro Ser Pro Pro Ala Glu Gly Ser Thr Gly | | |
| | 245 | 250 255 |
| Asp Phe Ala Leu Pro Val Gly Leu Ile Val Gly Val Thr Ala Leu Gly | | |
| | 260 | 265 270 |
| Leu Leu Ile Ile Gly Val Val Asn Cys Val Ile Met Thr Gln Val Lys | | |
| | 275 | 280 285 |
| Lys Lys Pro Leu Cys Leu Gln Arg Glu Ala Lys Val Pro His Leu Pro | | |
| | 290 | 295 300 |
| Ala Asp Lys Ala Arg Gly Thr Gln Gly Pro Glu Gln Gln His Leu Leu | | |
| | 305 | 310 315 320 |
| Ile Thr Ala Pro Ser Ser Ser Ser Ser Ser Leu Glu Ser Ser Ala Ser | | |
| | 325 | 330 335 |
| Ala Leu Asp Arg Arg Ala Pro Thr Arg Asn Gln Pro Gln Ala Pro Gly | | |
| | 340 | 345 350 |
| Val Glu Ala Ser Gly Ala Gly Glu Ala Arg Ala Ser Thr Gly Ser Ser | | |
| | 355 | 360 365 |
| Asp Ser Ser Pro Gly Gly His Gly Thr Gln Val Asn Val Thr Cys Ile | | |
| | 370 | 375 380 |
| Val Asn Val Cys Ser Ser Ser Asp His Ser Ser Gln Cys Ser Ser Gln | | |
| | 385 | 390 395 400 |
| Ala Ser Ser Thr Met Gly Asp Thr Asp Ser Ser Pro Ser Glu Ser Pro | | |
| | 405 | 410 415 |
| Lys Asp Glu Gln Val Pro Phe Ser Lys Glu Glu Cys Ala Phe Arg Ser | | |
| | 420 | 425 430 |
| Gln Leu Glu Thr Pro Glu Thr Leu Leu Gly Ser Thr Glu Glu Lys Pro | | |
| | 435 | 440 445 |
| Leu Pro Leu Gly Val Pro Asp Ala Gly Met Lys Pro Ser | | |
| | 450 | 455 460 |

<210> 468
 <211> 208
 <212> PRT
 <213> Homo sapiens

<400> 468
 Met Trp Lys Trp Ile Leu Thr His Cys Ala Ser Ala Phe Pro His Leu
 1 5 10 15
 Pro Gly Cys Cys Cys Cys Phe Leu Leu Leu Phe Leu Val Ser Ser
 20 25 30
 Val Pro Val Thr Cys Gln Ala Leu Gly Gln Asp Met Val Ser Pro Glu

| | | | | | | | | | | | | | | | | | |
|---|----|----|-----|--|--|-----|--|-----|--|-----|--|--|--|-----|--|--|-----|
| 35 | 40 | 45 | | | | | | | | | | | | | | | |
| Ala Thr Asn Ser Ser Ser Ser Ser Phe Ser Ser Pro Ser Ser Ala Gly | | | | | | | | | | | | | | | | | |
| 50 | | | | | | 55 | | | | 60 | | | | | | | |
| Arg His Val Arg Ser Tyr Asn His Leu Gln Gly Asp Val Arg Trp Arg | | | | | | 70 | | | | 75 | | | | | | | 80 |
| 65 | | | | | | | | | | | | | | | | | |
| Lys Leu Phe Ser Phe Thr Lys Tyr Phe Leu Lys Ile Glu Lys Asn Gly | | | | | | 85 | | | | 90 | | | | | | | 95 |
| | | | | | | | | | | | | | | | | | |
| Lys Val Ser Gly Thr Lys Lys Glu Asn Cys Pro Tyr Ser Ile Leu Glu | | | | | | | | | | | | | | | | | |
| | | | 100 | | | | | 105 | | | | | | 110 | | | |
| Ile Thr Ser Val Glu Ile Gly Val Val Ala Val Lys Ala Ile Asn Ser | | | | | | | | 120 | | | | | | | | | |
| | | | 115 | | | | | | | | | | | 125 | | | |
| Asn Tyr Tyr Leu Ala Met Asn Lys Lys Gly Lys Leu Tyr Gly Ser Lys | | | | | | | | 135 | | | | | | 140 | | | |
| | | | | | | | | | | | | | | | | | |
| Glu Phe Asn Asn Asp Cys Lys Leu Lys Glu Arg Ile Glu Glu Asn Gly | | | | | | 150 | | | | 155 | | | | | | | 160 |
| 145 | | | | | | | | | | | | | | | | | |
| Tyr Asn Thr Tyr Ala Ser Phe Asn Trp Gln His Asn Gly Arg Gln Met | | | | | | | | | | | | | | | | | |
| | | | | | | 165 | | | | 170 | | | | | | | 175 |
| Tyr Val Ala Leu Asn Gly Lys Gly Ala Pro Arg Arg Gly Gln Lys Thr | | | | | | | | | | | | | | | | | |
| | | | | | | 180 | | | | 185 | | | | | | | 190 |
| Arg Arg Lys Asn Thr Ser Ala His Phe Leu Pro Met Val Val His Ser | | | | | | | | | | | | | | | | | |
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| | | | 195 | | | | | | | | | | | | | | |

<210> 469
 <211> 208
 <212> PRT
 <213> Homo sapiens

| | | | | | | | | | | | | | | | | | |
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| Met Trp Lys Trp Ile Leu Thr His Cys Ala Ser Ala Phe Pro His Leu | | | | | | | | | | | | | | | | | |
| 1 | | | | | 5 | | | | 10 | | | | | | | 15 | |
| Pro Gly Cys Cys Cys Cys Cys Phe Leu Leu Leu Phe Leu Val Ser Ser | | | | | | | | | | | | | | | | | |
| | | | 20 | | | | | 25 | | | | | | 30 | | | |
| Val Pro Val Thr Cys Gln Ala Leu Gly Gln Asp Met Val Ser Pro Glu | | | | | | | | | | | | | | | | | |
| | | | 35 | | | | 40 | | | | | | 45 | | | | |
| Ala Thr Asn Ser Ser Ser Ser Ser Phe Ser Ser Pro Ser Ser Ala Gly | | | | | | | 55 | | | | | 60 | | | | | |
| | | | | | | | | | | | | | | | | | |
| Arg His Val Arg Ser Tyr Asn His Leu Gln Gly Asp Val Arg Trp Arg | | | | | | 70 | | | | 75 | | | | | | | 80 |
| 65 | | | | | | | | | | | | | | | | | |
| Lys Leu Phe Ser Phe Thr Lys Tyr Phe Leu Lys Ile Glu Lys Asn Gly | | | | | | | | | | | | | | | | | |
| | | | | | | 85 | | | 90 | | | | | | | | 95 |
| Lys Val Ser Gly Thr Lys Lys Glu Asn Cys Pro Tyr Ser Ile Leu Glu | | | | | | | | | | | | | | | | | |